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A TREATISE OF VETERINARY MEDICINE,

IN TWO VOLS.

BY JAMES WHITE,

OF EXETER,

LATE VETERINARY SURGEON OF THE FIRST, OR ROYAL REGIMENT OF DRAGOONS.

VOL. II.

CONTAINING THE

MATERIA MEDICA,

AND

PHARMACOPŒIA.

A NEW EDITION.

LONDON:

PRINTED FOR LONGMAN, HURST, REES, ORME, AND BROWN; J. WALKER; B. AND R. CROSBY, AND CO.; CRADOCK AND JOY; AND SHERWOOD, NEELY, AND JONES.

Printed by S. Hamilton, Weybridge, Surrey.

1814.

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VETERINARY

MATERIA MEDICA.

CONTAINING

AN ACCURATE DESCRIPTION

OF THE

VARIOUS SUBSTANCES

EMPLOYED IN VETERINARY MEDICINE;

WITH THEIR PARTICULAR EFFECTS

ON THE

BODY OF THE HORSE.

WITH OCCASIONAL OBSERVATIONS

ON THE DISEASES OF THAT ANIMAL.

PREFACE

TO THE FIRST EDITION.

WITHIN these few years only, has the Veterinary Art acquired a distinct appellation, and a solid foundation in this country. Receipts, handed down by traditionary skill, in which ingredients were accumulated without judgment or discrimination, constituted the principles and practice of what was termed Farriery; a name which it derived from the occupation of the persons who practised it, who were, in general, smiths or workers in iron—*Ferrarius, Ferrum.**

* Farriers were formerly termed Ferrers, which is certainly a better appellation.

To attempt to distinguish the causes of the horse's diseases, was far beyond their little skill; and in general, random trials of the few burning medicines in their list, formed their boasted practice.

The science at one time began to rise above the order of smiths, and attracted the notice of medical practitioners; but it was not hereby greatly improved: they were not aware of the difference that has since been found to exist between the structure and œconomy of the horse, and that of the human subject; nor had they any idea that this dissimilarity required much consideration with respect to disease, and the effect of medicine. Hence they were led to bring the therapeutics and pathology of the human body to *veteri-*

* See Dr. Bracken's Treatise on Farriery; also Gibson's, and Bartlett's.

nary science; and prescribed in somewhat larger doses to the brute animal, what they had found useful to man.* Their practice was of course unsuccessful, and the art sunk into its original disrepute. It is only since the institution of the Veterinary College, that the anatomy and physiology of the horse have been properly investigated, and the effects of medicines on his body correctly ascertained, by numerous and appropriate experiments, both in health and disease, so that a secure foundation

* *Arsenic* affords a striking example of this fact. In the human system, it is a deadly poison; but it has been given to the horse, even to the extent of two drams, without any sensible effect. (See *Arsenic.*)

It has in a few instances however produced violent effects even in smaller doses.

White Vitriol (a strong emetic in the human body in a small dose) has been given in the dose of eight ounces, without any violent effect. This, indeed, is the case with many other medicines, which in man are considered poisonous.

is now laid; and, as long as scientific men continue to study and practise the veterinary art, it must necessarily be in a progressive state of improvement.

Notwithstanding many books have already been published concerning the diseases of the horse, the therapeutical part, or what relates to the medicines proper for his diseases, has not been hitherto explained. Such a work appeared to the author a *desideratum* in the veterinary art, and has induced him to add the present volume to his Compendium of the Diseases, &c. of which the indulgent public has already demanded an eighth edition. Having thus ventured on untrodden ground, he had no guide to lessen the labour of the attempt; but, by numerous and attentive trials, from the author's experience and particular attention to this subject, he trusts he has been able to

furnish a volume not wholly unacceptable even to the experienced practitioner. It has been the author's aim to explain the general properties of the various substances employed in medicine, accurately describing their particular effects on the body of the *horse*, both in health and disease; the doses in which they may be given, their composition, and in short every thing that has any relation to them. This will be comprehended in the *Materia Medica*, or first part of the book: in the *Pharmacopœia* are comprised, directions for forming the various compositions in the most convenient and efficacious manner;—the whole forming a system of therapeutics, instructing the inexperienced how to distinguish the purest and most genuine drugs, and to compound them in such a way, as will enable him to combat with success the various diseases to which horses are liable.

PREFACE

TO THE THIRD EDITION.

WHEN the second edition of the Veterinary Materia Medica went to the press, the Author was prevented, by severe illness, from adding the result of his experience since the publication of the first. The present edition, however, has been carefully revised; and he hopes that some useful additions will be found in it.

ADVERTISEMENT.

MR. WHITE may be consulted on the Diseases of Horses, either personally or by letter, at his Veterinary Dispensary, Holloway-street, Exeter, (if by letter, the fee is half a guinea; personally, five shillings,) where all kinds of Horse and Cattle-Medicines are prepared and sold. Convenient Horse Medicine-Chests, containing a few necessary Instruments, may also be purchased at a short notice.

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PRACTICAL OBSERVATIONS on some Important Diseases of the Horse; on the Prevention and Treatment of Lameness; and on the Precautions to be observed in Purchasing Horses.

MATERIA MEDICA.

ABSORBENTS. Medicines are so termed that correct any *acidity* that may exist in the stomach or bowels, by combining with the *acid*, and forming an inoffensive substance: in this view they are said to absorb it. *Chalk*, *prepared oyster shells*, *magnesia*, and the *alkalies*, are of this kind.

Horses are sometimes disposed to eat their litter in preference to good hay, and not unfrequently they have a propensity to swallow earth, or any kind of rubbish. This is supposed to arise from the irritation of an *acid* in the stomach; and medicines of the *absorbent* kind are recommended for its removal; particularly *chalk*, mixed with chaff or cut hay. It is very probable, however, that the formation of *acid* in the stomach depends upon lebility, or some diseased condition of that

organ. *Absorbents*, therefore, seldom prove effectual, unless preceded by a dose of warm purging medicine; and then they should be given in conjunction with *tonics*, such as *gentian*, *quassia*, *decoction of camomile*, *wormwood*, &c. with an aromatic also, such as *cassia*, *ginger*, *cascarilla*, &c. When horses are in camp or at grass, they sometimes swallow so much earth, that it forms large balls in the intestines resembling stones, which have in time occasioned death. Hence we may learn how necessary it is to purge horses when taken from camp or grass; which will probably remove any of this earthy matter that may have collected in the bowels. Horses that work in stone-mills are more liable to this complaint than others: in the greater part of the cases I have met with, the horses had worked for some time in a mill, or were the property of a miller: horses in such situations should therefore have a mild purgative given them now and then, which would probably prevent the formation of those stones. I have lately seen a case of this kind which happened to a miller's horse: the poor animal suffered the most violent pain; though, when examined after death, only a

small stone of about three ounces was found. I have one in my museum which weighs ten pounds.

ACIDS. This term is applied to medicines that have a sour taste. *Acids* are also distinguished by their changing an infusion of blue violets or litmus to a red colour, and combining readily with *alkalies* and *earths.* Many of them also combine with or dissolve metallic substances, forming with them very useful compositions; such as *blue vitriol, lunar caustic, red precipitate,* &c.

Chemists divide *acids* into three classes; viz. mineral, vegetable, and animal; and describe many different kinds under each class: but we shall confine our attention to such as may be employed, with advantage, in Veterinary Medicine and Surgery.

SULPHURIC ACID, VITRIOLIC ACID, or *Oil of Vitriol.* This acid was formerly prepared from *green vitriol* or *copperas* (vitriolated iron), or from the *pyrites* or fire-stone. It is now, however, obtained from sulphur, by burning it with nitre, in a close vessel containing a small quantity of water, which is afterwards separated from it by evaporation. *Vitriolic acid* is a powerful caustic,

and generally requires to be diluted with water before it is used; but when it is wanted to destroy excrescences, particularly those which arise in *canker* of the foot, it may be used alone with advantage. One ounce of the *acid* to a pint of water, forms an useful lotion for obstinate cases of *grease*; if made a little stronger, it is a good application for foul ulcers. *Vitriolic acid* is sometimes mixed with *oil of turpentine* and *hog's lard* as a detergent ointment for ulcerated heels, or for dispersing indurated tumours; and when mixed with a proper proportion of *Spanish flies*, it forms an active *blister*. (See Blisters and Detergents.)

It is probable that *vitriolic acid* might be given internally as a *tonic*, with good effect: but for this purpose it requires so much dilution, that it could not be given to a horse, in sufficient quantity, without great inconvenience.

This acid, by combining with other substances, forms many useful compositions. With the mineral alkali, or soda, it forms *Glauber's salt*; with iron, *green vitriol*; with copper, *blue vitriol*.

NITROUS ACID, or *Strong Spirit of Nitre*.

This, like the preceding, is used only as an external application in veterinary practice; though it might probably be employed internally with good effect, were it not for the same inconvenience that attends the exhibition of the vitriolic acid.

Nitrous acid, in its concentrated or strongest state, is a powerful caustic; and when mixed with water, or unctuous substances, it forms many efficacious lotions and ointments for various external complaints. Almost every metal may be dissolved in this acid, with many of which it forms very useful caustics and escharotics; with silver it makes lunar caustic (*nitrated silver*); and with quicksilver, red precipitate (*red nitrated quicksilver*).—See Caustics, Escharotics, and Detergents.

That useful medicine termed nitre, is composed of this acid and the vegetable alkali or potash (*kali*). The metallic combinations of nitrous acid may be employed either in a liquid or solid state; they may also be diluted with water, or mixed with unctuous substances, to form detergent ointments of any degree of strength that may be required.

Strong or concentrated nitrous acid is of a deep yellow colour, approaching to orange, and emits suffocating fumes of the same colour. When water is added, the yellow colour is destroyed, and it ceases to emit fumes: the same effect may be produced merely by the application of heat; in this state it is termed *nitric acid.*

AQUA-FORTIS is made by mixing nitrous acid with about an equal quantity of water.

MURIATIC ACID, or *Spirit of Salt.* This acid is obtained by distilling common salt with vitriolic acid.

Spirit of Salt is generally of a light yellow colour, and when exposed to the air emits white suffocating fumes. This acid is sometimes used as a caustic, to destroy excrescences or fungous flesh, or to cleanse foul ulcers; and being considerably weaker than the two former, may be applied in its concentrated state, without inconvenience.

Muriatic Acid is a component part of several useful preparations, among which are calomel, sublimate (*muriate of quicksilver*) and crude sal ammoniac (*muriate of ammonia*). When *muriatic acid* is distilled with a mineral termed *manganese*, it ac-

quires new properties: it becomes capable of destroying the colour of vegetable substances, and is therefore employed chiefly in the process of bleaching; in this state it is termed *oxygenated muriatic acid.* If glanderous matter be exposed to the *fumes* of this acid, its contagious quality is destroyed.

Acetous Acid, or *Distilled Vinegar.* This well-known acid is commonly employed as an embrocation for *strains* and *bruises;* but it proves much more efficacious in those complaints if mixed with *sal ammoniac* (*muriate of ammonia*), and a small proportion of *spirit of wine.* An useful lotion is also made, by mixing with *vinegar* a small quantity of *Goulard* or *sugar of lead,* and then diluting it with water according to the nature of the case for which it is employed. *Goulard's extract,* or extract of saturn (*acetated water of litharge*), is made by mixing litharge with vinegar, and simmering the mixture for a considerable time over a slow fire. From the same materials, and varying the process a little, *sugar of lead* is prepared (*acetated lead*).

For all veterinary purposes, common vinegar is equal, if not superior, to that which is distilled.

TARTAREOUS ACID, or ACID OF TARTAR. *Cream of Tartar* consists principally of this acid, having a small proportion of vegetable alkali, or potash (*kali*), combined with it.

Though *Cream of Tartar* has been found useful in human medicine, it has no perceptible effect upon the horse, and I believe is very seldom used by experienced veterinarians. Writers on farriery have recommended cream of Tartar as a necessary ingredient in purgative medicine, to correct a dangerous acrimony supposed to reside in *aloes:* this opinion, however, is unfounded. Aloes, if not given too largely, is an innocent purgative; and were it otherwise, cream of Tartar has not the power of correcting acrimony. It has been recommended also in febrile complaints, mixed with infusion of senna, lenitive electuary, &c. as a cooling drink. But according to my experience, cream of Tartar as well as lenitive electuary and senna are absolutely useless in veterinary medicine.

Cream of Tartar is found in an impure state, adhering to the sides and bottoms of vessels in which wine has been kept.

AIR. The health of horses very much

depends upon the salubrity of the air in which they are kept; and it is probable that many of their diseases arise from the little attention that is paid to the ventilation of stables. It is said that even the *glanders*, a fatal and contagious disease, has been generated by confining horses in an impure air. It is a common practice with grooms, particularly those who fancy themselves profoundly skilled in the art of farriery, to stop every crevice they can find in the stable, so that pure air is with difficulty admitted; and the noxious vapours arising from the litter, from perspiration and respiration, are in great measure confined. Horses thus situated must necessarily suffer in a greater or less degree; and though the air may not be so contaminated as to occasion fatal diseases, it is sufficiently so to debilitate the constitution, and thereby lay a foundation for numerous complaints, as well as to create local diseases, such as inflamed eyes, obstinate coughs, and perhaps *moonblindness*, as it is termed. Horses that have weak eyes and lungs are sure to be injured by this treatment. Another inconvenience arising from it is, that of rendering a horse very suscep-

tible of cold. *Ventilation* is, therefore, an object of great importance in the construction of stables; and is most conveniently done by making proper apertures in the ceiling, communicating with the external air; and by means of windows, adapted to the form and size of the stable. It is a bad method of ventilation to leave the upper part of the racks open, so as to communicate with the roof of the building, as a current of air is thereby produced in the stall, from the ready ascent of the light air, over the horse's head. The litter should not be suffered to remain in the stall during the day, but be removed to some open place and well shaken, that the ammoniacal vapours it affords may be thoroughly dissipated. Should it be necessary for a horse to lie down in the day-time, he should be allowed fresh straw.

ALKALIES. *Alkalies* form one of the classes of saline bodies, and are of three kinds; 1st, The *vegetable alkali*, kali or potash. 2d, The *mineral alkali*, soda or natron: and the *volatile alkali*, or ammonia. Each of these will be described under the following heads: *kali*, *natron*, and *ammonia*: which names are employed by the London

college of physicians. *Alkalies* are distinguished by their changing blue vegetable colours to a green, and yellow to orange; by combining rapidly with acids, and forming with them neutral salts, (see Acids;) and by rendering oils miscible with water, (see Emulsions and Soap). The *vegetable* and *mineral alkalies*, from not being evaporable, except in a high degree of heat, were termed *fixed:* and *ammonia*, being evaporable in a low temperature, obtained the name of *volatile alkali.*

ALKANET ROOT. The only use of this root, is to give an elegant red colour to oils and ointments.

ALOES. This is the inspissated juice of certain plants of the same name, and the most effectual purgative for horses we are acquainted with. It is of an intensely bitter taste, and of a strong unpleasant odour.

The different sorts of aloes are distinguished by the names of the places whence they are brought.

SOCOTRINE ALOES is brought from the island Socotra, in the Indian ocean, and is supposed to be more safe in its operation than the other kinds. It is of a dark red-

dish or brown colour, quite opaque, and has a less disagreeable smell than the others; it sells at a high price, and is therefore not unfrequently adulterated. I have been so often disappointed in the effect of *socotrine aloes*, or rather what is commonly sold under that name, that I now always use the *Barbadoes*, which cannot be so easily adulterated without detection*.

BARBADOES ALOES is brought from Barbadoes, and has been generally considered as a rough medicine, very liable to produce griping, and other unpleasant effects; but I have always found it a safe and efficacious purgative. *Barbadoes aloes* is of a darker colour than the former kind, less brittle, and of a stronger and more disagreeable smell. It is certainly more active than the socotrine, and, as far as my experience goes, more certain in its operation: nor have I ever found it produce those dangerous effects that have been attributed to it, when given in a proper dose, and when the horse is not neglected during its operation: in-

* At this time (December 14, 1805) *Socotrine Aloes* are at about the same price or cheaper than *Barbadoes*.

deed, every kind of aloes is liable to produce even fatal consequences if given too largely, or if the horse be treated improperly while under their effect *. There is a peculiarity in the horse's intestines which renders them more liable to be injured by purgatives of every kind, than those of any other domestic animal: cathartic medicines should therefore be always prepared by persons of judgment and experience.

* A late writer on Cattle Medicine asserts that the Barbadoes Aloes is very rough, and often dangerous in its operation; and thinks his opinion confirmed by *an experiment made on his own stomach*. I can confidently assert, that I have given many hundreds of doses since the first publication of this book, and that not one single case has occurred in which it operated in a rough or unpleasant manner. I have also given an extensive trial to the Socotrine and Cape Aloes, and again found them very weak and uncertain in their effect. The former are therefore preferred, on account of their superior strength; the common dose for a hunter being 4 or 5 drams, joined with soap or kali, &c. this dose is equal to 7 or 8 drams of Socotrine Aloes; their purgative *quality* being of the *same kind*, though a given weight of the former contains more of it than the same weight of the latter. It may be proper to add, that my experiments have been made on the horse, and not on man.

Since the above was written, I have many times given the Cape Aloes a fair trial, as well as the Socotrine, &c., and find my first opinion on this subject so perfectly confirmed by experience, that I never will use any other kind of Aloes than the Barbadoes.—Sept. 1813.

CAPE ALOES is rather transparent, and very brittle: it is easily powdered, in which state it is of a bright yellow colour; the odour arising from it is not so strong as the *Barbadoes*, but rather stronger and less agreeable than the socotrine. This kind is sold at a much lower price than the others, but is so weak and uncertain in its effect, that it is seldom employed in veterinary medicine. The dose of *socotrine aloes* is from five drams to nine; *Barbadoes*, from four drams to six; and of the *Cape*, from six to ten drams.

Aloes generally operates more speedily when joined with *soap*, or either of the *fixed alkalies*. (See Alkalies.)

Aloes is sometimes given as an alterative in the dose of one or two drams. It is also an ingredient in *Friar's balsam*, and *compound tincture of myrrh*; preparations often used by farriers. (See Cathartics, Vulneraries, Alteratives.)

ALTERATIVES are medicines that act very gradually upon the constitution, and therefore require to be continued for some time. The medicines most commonly used as alteratives in farriery are antimony, nitre,

sulphur, and resin; these are generally given together, particularly the three former.

Though a mixture of these may sometimes produce good effects, it is by no means an eligible medicine: indeed, I have seen it given frequently, but have very seldom observed it do any good; and in the few cases where it appeared beneficial, nature, perhaps, had no inconsiderable share in the operation.

It is commonly supposed that the good effects of *alteratives* arise from certain changes they produce in the blood: it is more probable, however, that they act only on the solids; and though their action is scarcely perceptible, they will be found upon a careful examination to produce some sensible effect, either upon the bowels, the kidneys, or the skin; increasing the action of those parts, and causing them to secrete their respective juices or fluids more copiously. Another effect of *alteratives*, is to augment the vigour or tone of the system. From this view of the subject it appears necessary to divide *alteratives* into four classes; viz. *laxatives*, *diuretics*, *diaphoretics*, and *tonics*.

LAXATIVE ALTERATIVES are useful in

many cases, and may often be substituted for *purgatives* with great advantage.

When a horse is troubled with worms, and is too weak to take strong medicines, or when he cannot be spared from his work, they are extremely convenient, and generally beneficial. In obstinate cases of *grease*, and in chronic inflammation of the eyes, they often do good; they are generally serviceable also in coughs of long standing, or even when they are recent, if not caused by strangles, in which disease the throat is often so much inflamed, and so very sore, as to render the exhibition of medicine by the mouth improper. Glysters, however, are often beneficial in those cases. In short, there is no medicine of more general utility in the diseases of horses, than the laxative alteratives, the most effectual of which is *aloes*, in the dose of one or two drams, with an equal quantity, or rather more, of Castile soap.

When it is employed to destroy worms, from ten to twenty grains of *calomel* may be added. *Common salt*, in the dose of three or four ounces, is sometimes employed as an alterative, and generally opens the bowels in three or four days.

DIURETIC ALTERATIVES are composed of *nitre, resin, soap,* and *turpentine.* Diuretic alteratives are employed in swellings of the legs and other parts, or as a preventive, in horses that are subject to such swellings. They are given also to improve the coat and general condition of the animal.

Though not so effectual in many cases as the preceding, they are certainly very convenient and innocent, and produce so little disturbance in the body, that a horse may continue his work while taking them, without the least danger, even in the winter season. Nor is there any trouble in giving them; as a horse readily eats them, when in the form of a powder, with his corn. The *laxative alterative* has not this advantage; the aloes, of which it is composed, being extremely bitter, and therefore requires to be given in the form of a *ball.*

DIAPHORETIC ALTERATIVES are composed of medicines that act on the skin, gradually increasing the insensible perspiration, and giving a smoothness and gloss to the coat. The most effectual medicines of this class, are the preparations of *antimony* (see Antimony); but these may be rendered

more efficacious by being joined with other medicines. (See Pharmacopœia).

The complaints in which this kind of *alterative* is most useful, are those termed *surfeit* and *hidebound*; they are also employed to remove an undue determination of blood to any internal organ, or to diminish general plethora.

Diaphoretic alteratives seldom prove effectual unless assisted by exercise and good grooming.

TONIC ALTERATIVES are composed of the preparations of iron, copper, zinc, and arsenic: there are also vegetable *tonics*, such as Peruvian bark, quassia, gentian, and other bitter roots. It is remarkable that arsenic, though so poisonous in the human body, is the best *tonic* for horses we are acquainted with, and may be given even in considerable doses with perfect safety. (See Arsenic.)

The medicines we have just named will be fully described in their respective places. —(See Iron, Copper, Zinc, Bark Peruvian, Gentian, and Quassia; also Alteratives, Pharmacopœia.)

The alteratives recommended by writers on farriery are not composed according to

the distinction we have here made; but laxatives, diuretics, &c., are mixed with little discrimination: thus, as we have before observed, antimony, nitre, sulphur, and resin, form their general alterative; and when it was required to remove diseases, supposed to arise from obstruction in the blood-vessels, some ponderous medicines were prescribed: among these were Cinnabar, and Æthiop's mineral. This mechanical mode of removing obstructions, however, is now totally disregarded, being incompatible with our present knowledge of physiology.

ALTHEA. See Marsh-mallows.

ALUM. A saline body, composed of the *vitriolic acid*, and *alumine*, or pure clay. It is used internally as an *astringent* in *diarrhœa*, *diabetes*, &c. in doses from half an ounce to an ounce, and is generally joined with *bitters* and *aromatic stimulants*, such as *gentian*, *cassia*, *aniseed*, *carraway seed*, &c. For external purposes *alum* is very useful: it is a good remedy for the *grease*, when finely powdered and sprinkled on the diseased parts; when burnt, as it is termed, it becomes an excellent remedy for cleansing foul ulcers, and more effectually in obstinate cases of grease.

BURNT ALUM is made by putting any quantity of alum in an iron ladle, or common firepan, and keeping it over a gentle fire, until its watery parts are evaporated, and it is converted into a light and easily pulverable substance. If exposed to a strong heat for some time, the alum is decomposed, and of course useless.

ALKOHOL. See SPIRIT rectified.

ALLSPICE. JAMAICA PEPPER.

This is seldom employed in veterinary medicine, being very inferior to many cheaper medicines of the same class: its essential oil, however, possesses a considerable stimulant power, and may be employed in the composition of cordial medicines.

The dose is from twenty drops to half a dram.

AMBER. This is what naturalists term a *bitumen*. It affords only one preparation that is used in veterinary practice,—an essential oil, of a dark colour, and very disagreeable odour,—which is employed as an embrocation in strains, bruises, &c. generally mixed with other oil, such as *oil of elder, turpentine*, &c. It is given internally as an antispasmodic, in doses from two drams to half an ounce. For medical purposes

this essential oil is rectified, whereby it becomes of a lighter colour, and loses in some degree its unpleasant smell; but it does not appear to be rendered more efficacious. There is a *salt of amber* kept in the shops, procured from *amber* by sublimation, but it is never used in veterinary practice.

AMMONIA. This is the modern term for what was named *volatile alkali*, and is procured either from bones or sal ammoniac. It is kept in the shops, both in a solid and a liquid form. Strictly speaking, *pure ammonia* exists only in the form of *gas*, or air; but water will absorb a considerable quantity of this air; and when saturated with it becomes a violent stimulant, capable of inflaming and even blistering the skin. This is termed *water* of pure ammonia, or *strong spirit of sal ammoniac*, and is extremely useful in dispersing indolent tumours, if mixed with an equal quantity of sweet oil, in which camphor has been dissolved. It is a good application also in swellings of the back sinews or other parts, in consequence of strains or bruises. *Water of pure ammonia* is too strong for internal use; but when *ammonia* is by a chemical process combined

with *carbonic acid*, or fixed air, it assumes a solid form, and is rendered sufficiently mild for internal use. In this state it is named *prepared ammonia*, *volatile sal ammoniac*, or *smelling salt*, being much used for smelling-bottles, as its quick pungent odour is well calculated to remove faintness.

PREPARED AMMONIA is an excellent stimulant and cordial, and may be given in doses from half a dram to two drams. I have seen it very serviceable in the latter stages of fever, when debility is the leading symptom.

When prepared ammonia is dissolved in water to saturation, it forms *water of mild ammonia*, or *common spirit of sal ammoniac*; when distilled with spirit and some aromatic oils, *spirit of sal volatile*, or *compound spirit of ammonia*: and if *assafœtida* be added, the *fœtid spirit of ammonia* is produced, which is an excellent antispasmodic. (See Assafœtida.)

The SALT and SPIRIT OF HARTSHORN are nearly the same as the *prepared*, and the *water of ammonia*; but being distilled from bones or stag horns, which are of the same nature, they are slightly impregnated with

animal oil, which gives them a peculiar smell, and is supposed to increase their antispasmodic power. (See Antispasmodics.)

AMMONIACUM is divided into two sorts. The first is of a yellowish colour, interspersed with small pieces of wood, and other extraneous matter: the other, in small pieces or drops, of a whiter colour than the former, and much more pure; this is commonly called *drop ammoniacum.* The former, however, may be employed for veterinary purposes, making a little allowance in the dose for the extraneous matter it contains; but this may be in a great measure separated by pounding and sifting.

GUM AMMONIACUM is an excellent expectorant, in doses from three to five drams. It is advantageously joined with powdered squills, and in some cases with camphor, balsam of tolu, and opium.

Horses that are of a full habit, should be bled and take a laxative ball previous to the exhibition of those expectorants, which generally renders them more efficacious. It may be proper to observe, that *ammoniacum* is never to be employed in recent coughs,

arising from *catarrh*, or cold, but only in the *chronic* kind, that are not dependent on inflammation.

ANGELICA. An aromatic plant, too weak for veterinary purposes.

ANGUSTURA BARK. This is said to be a good tonic and stomachic medicine; and is often employed by medical practitioners, in cases where the Peruvian bark does not agree with the patient. It does not appear to be necessary in veterinary practice, and is very rarely used.

The dose is from half an ounce to an ounce or more.

ANISE-SEED or *Aniseed.* This seed is much used in horse medicine, as a stimulant and cordial, but its power is by no means considerable. It is thought to possess also an expectorant quality, and is therefore given in coughs and other complaints of the lungs, but is generally joined with other expectorants. It is certainly, though weak, a very grateful stimulant, and does much good where the stomach is weak, and disposed to flatulency; it is therefore an useful ingredient in cordial medicines. The dose is about one ounce or rather more.

All the virtues of aniseed reside in its essential oil, which is easily obtained by distillation. This is by far the neatest and most convenient form for using the medicine, and should generally be preferred.

The dose is from half a dram to one dram.

ANTHELMINTICS. Medicines that destroy worms, or expel them from the intestines. The most effectual are the mercurial purgatives. (See Pharmacopœia, article Anthelmintics.)

A variety of vegetables have been thought to possess this quality, but without foundation; among these are box, rue, savin, and wormwood. Æthiop's mineral, antimony, sulphur, and tin, have also been considered as *anthelmintics:* but I have never known any of them effectual in this way. I believe, however, that tin has not been fairly tried: and as it is an efficacious anthelmintic in dogs, it may probably be found useful in horses *. Of all the mercurial preparations,

* I have lately had an opportunity of trying the efficacy of tin, as a worm medicine. It sometimes destroys them, but not uniformly; and appears to be more effectual when joined with calomel.

calomel is by far the best for this purpose, and may be given with aloes, soap, and some aromatic oil, with a little ginger. Many prefer giving the calomel at night, and the purgative the following morning. Aloes are a good *anthelmintic*, particularly when mixed with a small proportion of gamboge. Arsenic has been very fairly tried, and does not seem to possess any *anthelmintic* power. A saline substance has been lately introduced from India, as a remedy for that species of worm termed *botts*. It seems to be composed of common salt and liver of sulphur, and is named *sal indus*. It does not appear to deserve the character that has been given of it; though, like salt or brine, it will sometimes cause the common or intestinal worm to be evacuated.

At present we know of no certain remedy that will destroy *botts*, though they often pass off spontaneously. (See Compendium, Veterinary Art, Worms.—See also Anthelmintics in Pharmacopœia.)

It has been supposed, that worms are sometimes generated in consequence of debility in the digestive organs. Tonics have therefore been recommended, particularly

the vegetable bitters; such as bark, wormwood, camomile, &c. When worms are discovered in the horse's dung, after a fair trial has been given to mercurial purgatives (especially if he appears to be weak, and incapable of much work), it would be adviseable to give tonic and cordial preparations, with a generous diet: but whenever this is done, there must be proportionate exercise.

ANTIMONY. This is a heavy, shining, brittle mineral, somewhat like black lead when powdered, but of a darker colour. It is common in Germany and France. A small quantity is found in Cornwall, but not sufficiently pure for medicinal purposes.

Antimony is composed of a metallic substance termed *regulus of antimony*, and *sulphur*. It is given as an *alterative*, in doses of an ounce or more, to improve the coat and condition of horses: some give it to destroy worms; but it does not appear to possess any power of that kind. A variety of useful preparations is made from antimony, many of which are more efficacious than the mineral itself; among these are *liver of antimony* (sulphurated oxyd of antimony), *antimonial powder*, which is said to be the same

as *James's powder*, *emetic tartar* (tartarized antimony), *golden sulphur of antimony*, and *kermes mineral*;—each of these will be described in its proper place.

ANTISEPTICS are medicines which prevent putridity, or remove it if already begun. The most efficacious are *bark* and other bitters; *opium*, *wine*, *ether*, *ammonia*, and *camphor*.

Horses do not appear to be subject to those fevers which, in the human system, are termed putrid; so that these medicines are not often required. In gangrene, or mortification of the external parts, however, they are very useful. The efficacy of these medicines seems to depend on their tonic or strengthening quality; as putridity in the living body is generally the effect of a high degree of debility.

ANTISPASMODICS are medicines which possess the power of allaying inordinate or painful motions in the system, particularly those involuntary contractions in parts which are naturally subject to the command of the will.

Medical writers divide *antispasmodics* into two kinds; viz. stimulants, and sedatives.

To the former belong arsenic, preparations of copper, zinc, and iron; also ammonia, ether, essential oils, &c. The latter comprehends opium, musk, camphor, and all the vegetable narcotics.

Medicines of the fœtid kind, such as galbanum, assa fœtida, &c., have also an antispasmodic quality.

When spasm arises from irritation, *sedatives* are to be given; but when it depends merely on debility, *tonics* are evidently proper.

APERIENTS. Opening medicines. (See Laxatives and Cathartics.)

AQUAFORTIS. Weak nitrous acid. (See Acid Nitrous.)

ARABIC GUM. (See Gum Arabic.)

ARSENIC. There are two kinds of *arsenic* kept; the *white*, and the *yellow*. The latter is a combination of *white arsenic* and sulphur, either natural or artificial, varying in colour according to the proportion of sulphur, which, when considerable, gives it an orange or red colour; it is then called *realgar*, and used as a pigment only.

White arsenic is obtained in the process of roasting certain ores. The arsenic sub-

limes, and is found in chimneys adapted to the purpose. It is beautifully white and very heavy, but easily reduced to a powder. The powdered arsenic of the shops is generally adulterated, and ought never to be depended upon. The practitioner should always buy it in the lump, and either powder it himself or see it done.

White arsenic is one of the best *tonics* in horses that we are acquainted with; and, though a violent poison in the human system, may be given to this animal with perfect safety. From its tonic quality it has often suspended, or apparently cured the *glanders;* but its effect in this way, I believe, is never permanent. It is prudent to begin with a small dose, but not less than eight grains. This may be gradually increased to twenty or thirty, and continued as long as there is occasion. In experiments on glandered horses, I have seen a dose of two drams given twice a day, and continued for a week: at which period it produced inflammation of the bowels. I have often known two drams given for two or three days successively, without any perceptible effect; it will sometimes, however, in that dose, oc-

casion great disturbance in the stomach and bowels. In smaller doses it seems perfectly innocent. When arsenic is employed as a tonic or strengthening medicine, it should be finely powdered, and mixed into a ball with aniseed, ginger, or other cordials. At the same time, attention should be paid to the horse's diet, &c. It is necessary to give some mucilaginous liquid, such as *water-gruel*, or infusion of linseed, just before the *arsenic*, that it may not act upon the stomach too violently. (See Balls.)

The cases in which arsenic is said to be most beneficial, are those where horses become weak and emaciated without any apparent cause; sweating with the most moderate exercise, and almost incapable of doing a day's work.

I have tried its powers as a vermifuge; and though in some cases it appeared to destroy the worms, it was by no means uniform in its effect. In one case, where it was given by way of experiment to a glandered horse, it appeared to have destroyed some botts, which were found dead in the stomach.

ASSA FŒTIDA, a gummy and resinous

substance, possessing a powerful and most unpleasant smell. It is much used in human medicine, as an *antispasmodic*, in nervous and hysterical complaints. In veterinary practice it is not so frequently employed, though I think I have observed good effects from it in spasmodic complaints, and some practitioners speak highly of its virtues. It is said to be serviceable in obstinate coughs, or thickness of wind, and flatulent colic. It appears to be more efficacious when joined with ammonia, in the form of *fœtid spirit of ammonia*, a preparation kept in the shops. The dose of assa fœtida is from two drams to half an ounce or more; it is generally joined with galbanum, ammoniacum, &c. When employed as an expectorant, *squill* is an useful addition.

The dose of the fœtid spirit of ammonia is from one ounce to one and a half ounce.

ATTENUANTS. Medicines were thus termed, which were supposed to render the blood more fluid.

BALLS, or *Boluses*. This is the most common form in which medicine is given to horses, and generally the most convenient. Every groom ought to make himself expert

in giving *balls*, without using the instrument termed a *balling iron:* but there are some horses that will not take a ball by any other means. In giving a ball, the horse's tongue is drawn out on the off or right side, and held firmly with the left hand, while with the right the ball is quickly passed over the tongue into the pharynx, or top of the gullet: the moment the right hand is withdrawn from the mouth the tongue is let loose, and the ball generally swallowed. The *balling iron* is so contrived as to keep the mouth open, while the ball is forced into the throat; it is then immediately withdrawn.

Balls should be made at the time they are wanted; as by keeping they often become so hard as to be almost insoluble in the stomach, sometimes passing through the intestines unchanged: by keeping they also lose much of their strength, particularly when the ingredients are evaporable in the common temperature of the atmosphere, which is the case with camphor, ammonia, essential oils, &c. But the most serious inconvenience which arises from giving balls that have been kept until they become very hard, is, that they are liable to stick in the

throat or gullet, and thereby endanger the horse's life: indeed, I have known horses destroyed in this way.

When balls are composed of very stimulating ingredients, the horse should drink a little water before they are given, to prevent too strong an action upon the stomach: it is better to give the water before the medicine, as a horse can seldom be induced to drink immediately after.

When arsenic, sublimate, or any of those corrosive medicines are given, a considerable quantity of water-gruel or decoction of linseed should be given before the ball. Balls cannot be conveniently given unless wrapped up in paper: but for this purpose the softest and thinnest should be chosen.

BALSAMS. Balsams are generally fluid, of various degrees of thickness, odorous, and combustible: they resemble resins, being soluble in spirit of wine; and when thus dissolved, impart to water a sweetish taste, and a milky appearance.

BALSAM OF CANADA is a very pure kind of turpentine; and though preferred on this account to Venice and common turpentine, is unnecessary in veterinary medicine, being

very expensive; whereas Venice turpentine is much cheaper, and I believe equally efficacious.

Canada Balsam is a strong diuretic in the dose of one ounce or more: in smaller doses it has been recommended in chronic cough, and diseases of the lungs.

BALSAM OF COPAIVA, or *Capivy*, possesses nearly the same properties as the preceding. It has been often employed with success in the flatulent colic or gripes: it has been given also in chronic cough with good effect.

The dose is about one ounce or more.

BALSAM OF GILEAD is nearly similar to the *capivy*, but more pleasant. Many virtues have been attributed to these balsams by medical writers: they were supposed to heal ulceration of the lungs, kidneys, or other internal parts, and to be powerful corroborants. They do not appear, however, to possess these qualities, nor do they seem to differ much from *turpentine* in their medical virtues. (See Turpentine.)

BALSAM OF PERU. This is of a different kind from the former balsams, being more stimulating, and better calculated as a re-

medy for obstinate coughs : it should be assisted, however, by other expectorants, such as *squills*.

The dose is from one to two drams. (See Expectorants and Pectorals, in Pharmacopœia.)

BALSAM OF TOLU. This is generally in a solid form, of a light yellowish colour, and fragrant odour : it is used for the same purposes as the balsam of Peru, in doses from two to four drams.

BALSAM OF SULPHUR. This is made by boiling sulphur and olive oil, until they are united : they form a dark-coloured mass rather like treacle in appearance, but more tenacious, and of a very disagreeable odour.

Balsam of sulphur is used as an *expectorant ;* but farriers frequently employ it in recent inflammatory coughs, which is highly improper. It may be useful, however, in *chronic* coughs.

The dose is from half an ounce to one ounce.

BARBADOES TAR is a bituminous substance, brought from the island of Barbadoes. It is nearly of the colour and consistence of common tar, but smells differently,

and its colour approaches more to brown. It has a considerable diuretic power, and is said to be useful in *chronic coughs*. Farriers frequently use it for this purpose; but by giving it indiscriminately they often do mischief. They also employ it as an external remedy in strains and bruises, generally dissolved in oil of turpentine and oil of elder.

BARBADOES ALOES. (See Aloes Barbadoes.)

BARILLA. The name of a sea plant, from the ashes of which *mineral alkali*, or *soda*, is obtained in an impure state. (See Alkalies.)

BARK PERUVIAN, or *Jesuit's Bark*. Though in the human subject bark is an useful tonic and febrifuge medicine, it has no very remarkable effect on the horse. I have seen it do good, however, in gangrene, or mortification of the external parts, when mixed with opium, ammonia, and ginger. It is serviceable also in cases of debility, arising from large suppurations, and where there is a copious discharge of matter. It may be employed likewise in *diabetes*, a disease consisting in an excessive discharge of urine.

The dose is from six drams to one ounce and a half or two ounces.

There are three sorts of bark: the pale or *Jesuit's*, the *red*, and the *yellow*. The first is considered the best, and is most commonly used; but the others do not greatly differ in their effects. *Oak bark* would probably be found an useful substitute for Peruvian bark. By boiling bark in water a considerable time, its virtues are said to be considerably diminished.

BARLEY is sometimes used as food for horses; but is less fit for that purpose than oats, or beans: I have known it tried as a substitute for the former, when it was found difficult of digestion, and productive of many complaints: if horses, however, be accustomed to it gradually, it proves very nutritious and useful.

BATHING. A remedy seldom employed in the diseases of horses. I once saw an obstinate case of costiveness removed by driving the animal into a river. It is said, that lameness, arising from strains, may be cured by making the horse swim; but I am inclined to doubt the efficacy of this practice. The warm bath would probably be found

serviceable in spasmodic complaints, if it could be easily managed.

BAY-LEAVES are used only as an ingredient in fomentations.

BEANS are often used as an article of diet. If given moderately to horses that work hard, they prove extremely useful and invigorating; but to such as are not much worked they often do harm, by disposing the system to inflammatory complaints.

BENZOIN, or *Gum Benjamin.* A concrete resinous substance of a yellowish colour, inclining to pink, and variegated with small white masses. By exposure to a strong heat, it gives out an extremely light flowery substance, which is termed *flowers of Benjamin.* This is beautifully white and fragrant, and used in medicine in coughs, and other complaints of the lungs. In veterinary medicine neither the resin nor flower are employed, nor do I know any disease in which they are likely to be of use.

The former is an ingredient in the traumatic or Fryar's balsam, now called compound tincture of Benjamin; and the latter is employed in making paregoric elixir, or camphorated tincture of opium.

BIRTHWORT. This root, though formerly celebrated, is now very rarely employed. Farriers sometimes use it as a stimulant, but its powers are slight, and it is now superseded by more valuable medicines.

BISTORT. The roots of this plant are considered the most powerful of the vegetable astringents: they have been recommended as a *styptic*, to restrain hæmorrhages, but ought never to be depended upon for this purpose. Many imaginary virtues have been attributed to this plant: perhaps as a powerful astringent it may be useful in certain cases of diarrhœa, particularly that to which horned cattle are subject. The dose is from half an ounce to one ounce, and may be given either in powder, or boiled in water and made into a drench.

BLEEDING. This operation is frequently required in the diseases of horses: and if employed seasonably, and to a sufficient extent, is the most efficacious remedy we are acquainted with. When a horse appears dull and heavy, and indifferent about his food, by bleeding we often prevent a fever. If a horse is bled at the commencement of a cold,

the complaint generally proves moderate, and of short continuance. In all cases of internal inflammation, or symptomatic fever, bleeding is the most essential remedy, provided the operation be performed at an early period, and the blood drawn in sufficient quantity. In such cases I have often taken away five quarts, and repeated the operation the following day when it appeared necessary. By bleeding copiously at first, those formidable diseases are crushed at once; while by suffering them to proceed or become at all violent, which they will do unless this practice is adopted (or if only a small quantity of blood is drawn), they generally prove fatal: nor will bleeding then be of any service.

Bleeding is either general or local; that is, it is done either so as to affect the system in general, or a particular part only. For general bleeding, the jugular or neck vein is most convenient.

When the vein is firmly pressed with the fingers of the left hand, the blood is prevented from descending, and that part of the vein which is above the fingers is considerably distended, and becomes very con-

spicuous. In this state it may be easily opened with a lancet held in the right hand. The vein will continue to bleed as long as the pressure below is continued.

Farriers bleed with a *fleam*, which, though a clumsy method of operating, is certainly safer in unskilful hands. In topical bleeding, a vein is chosen as near as possible to the affected part, or the vessels covering the part are opened: in the inflammation of the eye, for example, relief is often obtained by scarifying the inner surface of the eye-lid, or by opening a small vein which is easily seen going from the inner corner of the eye towards the nose.

A graduated tin vessel, capable of containing five quarts, is very convenient for the purpose of receiving the blood; every pint being marked on the inside of the vessel, so that the quantity of blood that is taken off may be exactly known. The blood should always be preserved, that we may judge from its appearance of the nature of the disease, and whether it is proper or not to repeat the operation. When it continues fluid a considerable time, it denotes an inflammatory state of the system. Should a

whitish or light buff-coloured jelly appear on its surface after it has coagulated or settled, and should this jelly be of considerable thickness, rather firm, not easily penetrated by the finger, we may be satisfied that the horse's complaint is inflammatory; that bleeding was a proper remedy; and that, if the symptoms continue, the operation may be repeated with advantage: but if the blood coagulates quickly, is uniformly of a dark liver colour, loose and easily broken, with a considerable quantity of water upon its surface, it denotes debility, and shews that the disease arises from a weakness of the system; that instead of *bleeding*, *tonic* and *cordial* medicines are to be employed, with every thing that may tend to restore the animal's strength.

In order to judge correctly by the appearance of the blood, it should be drawn from a large orifice, and not suffered to run down the sides of the vessel which receives it. The first quart that is drawn should be put aside for examination, and not shaken or disturbed in any way until it has perfectly coagulated.

When bleeding is employed as a preven-

tive, or in any slight complaints, from two to three quarts may be taken off, according to the horse's strength and condition; but in cases of internal inflammation or fever, a more copious evacuation is necessary.

When horses are taken from camp or grass, and put into warm stables, they are very subject to inflammatory complaints and dangerous fevers: under those circumstances, moderate bleeding now and then will prevent such diseases. Horses that are getting into condition, as it is termed, are liable to similar disorders, unless moderate bleeding is occasionally employed. I am inclined to believe, however, that it is a bad practice to bleed often upon trifling occasions; it is liable to induce a plethora or fulness of habit, whereby a horse is rendered more susceptible of disease than he would otherwise be. Moderate purging and regular exercise, with a proper regulation of diet and temperature, are fully adequate to the prevention of disease on those occasions; but these are too often neglected.

We are told by a pretender to veterinary science, that it is seldom necessary to pin up the orifice, which is made in the skin by

bleeding. I grant there is not often any danger to be apprehended from its bleeding again; but unless it is pinned up, that is, unless the lips of the wound are brought into contact, and kept in that situation, by passing a pin through the edges of the skin, and twisting a little tow round it, as is generally done by farriers, considerable inflammation and swelling will sometimes take place in the wound, and matter will often form in consequence. I can also assure that gentleman, from considerable experience, that the *fleam* has been found upon many occasions, particularly for opening the neck vein, a better instrument than the *lancet:* the latter makes an orifice in the skin, not larger than the vein; and as the horse is generally a little restless, the blood soon gets between the skin and the vein, plugging up the orifice in the latter, and sometimes diffusing itself in the cellular membrane, so as to cause a swelling. I do not know whether this opinion is sanctioned by Solleysell, la Fosse, Gibson, and other old writers, or not; I can only say, that I have learnt it from experience, which I consider a surer guide than any book of

farriery, not excepting the *Philosophical Treatise* of the gentleman to whom I allude. I have before endeavoured to show the advantage of early and copious bleeding in the fevers of horses, whether simple or symptomatic. (See the Compendium, Bleeding, and Fevers.)

I think it necessary, however, to repeat, that it is the most important remedy we can employ on these occasions, and may be carried to the extent of five quarts, or even six in large strong horses, with the best effect. The practice of bleeding moderately in *fevers* is highly to be reprobated: it raises for a short time delusive hopes of a recovery, but scarcely ever proves effectual. I do not mean to recommend such plentiful bleeding on every occasion, or when a horse is merely affected with a catarrh or cold; it is only proper in cases of *real fevers*, depending either upon *internal inflammation*, upon an undue determination of blood to the interior parts of the body, or upon general inflammation. The disease termed staggers must be included.

BLISTERS. This term is applied to medicines that inflame the skin, and cause

watery bladders to rise upon its surface: the most useful of this kind is the cantharis, or Spanish fly, which forms the principal ingredient in all our blisters. There are many others, however, which are generally mixed with it, as auxiliaries: among these are helebore, euphorbium, turpentine, &c. (See Pharm. article Blisters.)

Blisters are of great use in veterinary medicine: they are extremely efficacious in dispersing callous swellings, the consequence of *strains*, *bruises*, &c.

In inflammation of parts remote from the surface, they are of great service. When the internal parts of the foot are inflamed, relief is generally obtained by blistering the pastern, provided the subordinate or auxiliary remedies are not omitted, such as rasping the hoof, paring the sole, soaking the horny part of the foot in warm water, or applying a poultice to it, and giving a dose of physic.

Blistering is employed also for *curbs*, *windgalls*, *spavins*, &c. It is serviceable also in inflammation of the internal organs. When the lungs are inflamed, for example, by blistering the sides extensively, we lessen

the determination of blood to the diseased part, and thereby afford great relief. (See Compendium.)

Broken knees, unless skilfully treated, frequently leave a callous swelling on the part, for the removal of which, blistering should always be employed. When blisters are properly made, and free from any caustic ingredients, such as sublimate, vitriolic acid, &c. there is no danger of destroying the hair; and if the first blistering does not prove effectual, it may be repeated until the desired effect is produced.

BLUESTONE. Blue Vitriol, or *Vitriolated Copper*. This is composed of oxyd of copper and vitriolic acid. It is extremely useful, as a mild caustic and detergent, and is an excellent application to almost every kind of ulcer, disposing them to heal sooner than any other application. The best method of using *blue vitriol* is in a state of solution; that is, put as much of it (in powder) into a pint of water as the latter is capable of dissolving; and to facilitate the solution, let the water be boiling hot: this solution may be used alone, or diluted with water, as the circumstances of the case may

require; it may also be made stronger by the addition of *strong nitrous acid*, or vitriolic acid. When *blue vitriol* is used in substance, it should be finely powdered and sprinkled on the ulcer.

In bad broken knees, the ligaments are often wounded, and there is generally some difficulty in healing the wound: I know nothing that does so much good in those cases as the *solution of blue vitriol*, particularly if applied hot.

As an internal remedy, blue vitriol is said to possess a *tonic* power; but it should be given cautiously, and much diluted. I once saw six ounces given to a glandered horse, by way of experiment: it soon destroyed the animal, by occasioning the most violent inflammation of the stomach and bowels: it appeared to have acted as a caustic on the former organ.

In giving blue vitriol, I would recommend a very small dose at first, not more than half a dram, which might be given in the form of a ball, provided it is properly dilated in the stomach, by making the horse drink immediately before, or after.

BOLE. A red clay, containing a small

proportion of oxide of iron, often used by farriers as an astringent in diarrhœa, or in bloody urine; but it certainly does no good in those complaints. It is sometimes, however, serviceable as an application to ulcers, where the discharge is thin, and acrimonious.

BORAX, when dissolved in water, is sometimes applied to the mouths of young horses that are inflamed by cutting teeth: I have found, however, that alum, which is much cheaper, is equally effectual.

BOX. The leaves of box have been said to destroy worms; but if really *anthelmintic*, it is certainly too weak to deserve our attention.

BRIMSTONE. (See Sulphur.)

BUCKBEAN. An useless plant; and though valued formerly, is now scarcely ever employed.

BUCKTHORN. The juice of the berries of this plant is supposed to possess a purgative quality, and is generally made into a syrup with sugar, though farriers sometimes employ it with other purgatives: it is certainly useless as a medicine for horses.

BURDOCK, a common plant, known by

its burs. The leaves are said to be diuretic; and are employed in making the green elder ointment, or Pompilion (*Ung. Populeon*), so much used by farriers.

BURGUNDY PITCH. The inspissated juice of a species of fir-tree: it somewhat resembles yellow resin, but it is less brittle and transparent. What we commonly meet with in the shops, appears to be an artificial composition. *Burgundy Pitch* is often used by farriers in making *charges* and strengthening plasters, also in some of their ointments.

BURNT ALUM. (See Alum.)

BUTTER OF ANTIMONY, or *Muriated Antimony.* A dark-coloured liquid, possessing strong caustic powers, and composed of antimony and muriatic acid.

It has been highly spoken of as a remedy for quittors, and other ulcers of a similar kind: it is certainly a strong caustic, and may be employed in cases where such applications are required.

There is something peculiar, however, in this caustic; which is, that by coming into contact with a moist part, it is immediately decomposed; so that when applied to ulcers its action is of very short duration.

CALAMINE, or *Lapis Calaminaris.* A metallic calx, which, when powdered, resembles a white earth inclining to a red colour. It is employed for the purpose of drying or healing ulcers which discharge a thin acrimonious matter; it is also mixed with hog's lard, oil, and wax, so as to form an ointment, which is used for the same purposes. This ointment, or cerate, is the celebrated *Turner's Cerate.*

CALOMEL is the most useful of the mercurial preparations, and composed of oxide of quicksilver and muriatic acid. When prepared, it is a fine white powder, rather inclining to yellow, and very ponderous. It is the most efficacious *anthelmintic* we are acquainted with (See Anthelmintics), and an excellent *alterative.* It has often cured that destructive disease termed *farcy,* and has considerable effect in the *glanders;* though it has not hitherto been so employed as to cure that disorder radically. When a brisk purgative is wanted, calomel may be added to the common physic, which is composed chiefly of aloes. It has been given with good effect in obstinate cases of grease, chronic inflammation of the eyes, and diffused swellings of the hind legs.

Though *calomel* possesses all these useful qualities, it must be given with caution, and its effects carefully watched; as it sometimes acts very violently and unexpectedly on the stomach and bowels, and induces a dangerous degree of weakness. A profuse salivation is sometimes the effect of *calomel*; the mouth becoming so sore, and the tongue so swollen, as to prevent the horse's feeding. When these accidents occur, the medicine should be discontinued a short time, and the horse allowed to drink plentifully of water-gruel, linseed infusion, or any other mucilaginous drink. When the bowels are affected, opium is the best remedy: in some cases, where it has produced great irritation about the *anus* or bladder, opium should be given in the form of *glyster*. (See Glysters.) If the mouth becomes very sore, let it be washed with a solution of alum, by means of a syringe.

Whenever *calomel* is given, the horse must be kept warm, drink warm water, and have regular exercise. When calomel is given as an anthelmintic, or as a purgative, the dose is from one dram to two; as an alterative, from fifteen grains to half a dram.

Calomel generally acts upon the kidneys, increasing the discharge of urine. (See Alteratives and Anthelmintics.)

CAMOMILE. A bitter herb, the *flowers* of which are employed in fomentations. No other use is made of *camomile* in veterinary practice.

CAMPHOR is procured from a Japanese tree, and brought to Holland, where it is purified from much extraneous matter; from thence it is imported into this country.

Camphor is a medicine of considerable efficacy in the diseases of horses, though scarcely known to farriers as an internal remedy. It is a powerful sedative and antispasmodic; and, I think, an excellent remedy that can be employed in fevers. When joined with nitre, it gives speedy relief in suppression of urine, or difficulty in staling; except when it arises from inflammation of the kidneys,—but in the horse this complaint is generally spasmodic.

Camphor is a good remedy in flatulent colic, or gripes, particularly if joined with oil of juniper or other carminatives. (See Carminatives.) It has been recommended also in locked-jaw, mixed with opium. The

dose is from one to two drams; though it may be given, I believe, to a greater extent without danger. The dose I employ, is one dram and a half, or two drams.

As an external remedy, *camphor* is much used: it is generally dissolved in spirit of wine, oil of turpentine, or common oil, so as to form embrocations for strains, bruises, hard swellings, &c. Soap is often added to those solutions, and sometimes oil of rosemary. (See Embrocations.)

CANTHARIDES, or *Spanish flies*. These insects are found adhering to trees of different kinds in France, Germany, and Spain: those from the latter country are considered the best.

Cantharides are so very acrimonious, that they inflame and excoriate the skin; and hence raise a more perfect blister than any other substance: this property renders them extremely useful in veterinary practice, in which a good *blister* is the most important of all external remedies. *Cantharides* should be finely powdered; but previously to this operation they should be sifted, that they may be free from a great deal of dust and useless matter, which we generally observe

with them. When powdered, they may be either formed into an ointment, a liniment, or a spirituous tincture; but the former is the best form, and most commonly used. (See Blisters, Pharm.)

CAPSICUM. The pod, when powdered, forms *Cayennepepper*, which is a most powerful stimulant. I have been informed, it is used with the best effect as a horse medicine in the East Indies; but could not learn precisely what the complaints were in which it was employed, though I believe it was the *flatulent colic*, or *gripes*. I have seen it given in cases of flatulency, weakness of the stomach, and indigestion, with success, in doses of half a dram, joined with a little powdered aniseed, liquorice, and syrup, so as to form a ball. (See Cordials, Pharm.)

CARAWAY. The seeds are much used in veterinary practice, as a *cordial* and *carminative*. The essential oil, which contains all the virtues of the seed in a concentrated state, is the most convenient for veterinary purposes; the dose of which is from half a dram to a dram: it may be mixed either with ale, milk, or water, into a drench; or formed into a ball with liquorice powder, ginger,

and honey. When the seeds are made use of they should be powdered, but never boiled in any liquid, according to the practice of farriers, as their virtues are thereby in a great measure evaporated: nor should they be purchased in powder; for by being kept in that form, their essential oil is gradually dissipated.

In whatever form it may be used, *caraway* is certainly an useful *cordial* and *carminative*. The dose of the *seed* is about an ounce; to which may be added a dram or two of powdered ginger. It may be useful to observe, that from twenty to thirty drops of *oil of caraway* are an useful addition to aloes, in making a purgative ball; or, as it is commonly termed, *a dose of physic*. (See Cordial Carminatives, and Cathartics.)

CARBONIC ACID AIR, or *Fixed Air*. In medical practice this air has been employed, on account of its *antiseptic* quality, in foul and fœtid ulcers, or in gangrenous wounds. It is generally applied by means of a fermenting poultice, composed of oatmeal and yeast. This poultice has been found serviceable in that disease of the horse's heels termed grease, generally cor-

recting the offensive smell which attends it.

CARDAMOM SEEDS. There are two sorts of cardamoms, the *greater* and *lesser*: the latter are commonly sold in their shells or pods, from which they are easily freed; they are preferred in medical practice, probably on account of their more grateful smell and taste, but the larger sort, which are generally termed *grains of paradise* (See Grains of Paradise), are better for veterinary purposes, being a stronger stimulant, and much cheaper. The lesser cardamoms make an elegant cordial, and are possessed of considerable strength; their pods also have the same properties, but in a weaker degree. The dose, when the pods and seeds are powdered together, is from one to three drams. *Grains of Paradise* will be noticed in its proper place.

CARDIACS. (See Cordials, Pharm. and Mat. Med.)

CARMINATIVES. Medicines that correct flatulency in the stomach and bowels. (See Carminatives, Pharm.)

CARROTS are sometimes used as an article of diet, and may be given in moderate quantity, with great advantage to horses

that are thick winded, have coughs, or are disposed to inflammatory complaints, such as grease, inflamed eyes, &c. They appear to be easy of digestion, and very nutritious.

CASSIA. A bark, somewhat like cinnamon both in appearance and taste, but thicker and larger. There are some fine pieces of *cassia* which so nearly resemble cinnamon, as to be not easily distinguishable from it, and are frequently sold for it in the shops. For every veterinary purpose, *cassia* is equal to cinnamon, provided it is well chosen: such parts should be selected as have a pleasant, sweetish taste, succeeded by one extremely hot and pungent: this is generally found in the thinner pieces, which are curled up like *cinnamon.*

Cassia is a strong aromatic stimulant, and an efficacious ingredient in *cordial* preparations. The dose is from one to three drams. An essential oil is obtained from cassia, which bears a very high price, but is so excessively powerful, that two drops will impart a strong taste to half a pint of water.

CASSIA BUDS. These nearly resemble

Cassia in their taste and medical qualities, and may be used for the same purposes.

CASTOR. A peculiar animal substance, taken from the beaver: it has been extolled by some practitioners as an antispasmodic and sedative; while others have doubted its efficacy. It is very seldom used as a horse medicine; nor does it seem likely ever to be much employed, there being cheaper and more certain medicines of the same class.

CASTOR OIL. An useful laxative in cases where it is necessary to open the bowels, and at the same time avoid irritation; it is therefore extremely proper in fevers, accompanied with costiveness, particularly when there appears to be pain and irritation in the bowels.

The dose is from a pint to a pint and a half.

It has been asserted that *castor oil* is a good remedy for worms; but I have seen it given in this case without effect.

CATAPLASM. (See Poultice.)

CATECHU. (See Japan Earth.)

CAUSTICS are substances that burn or destroy parts to which they are applied. The most powerful is the red-hot iron, or

actual cautery, which is often employed in veterinary practice, to remove *spavins*, &c. (See Firing.) Many of the other caustics are possessed of great strength, and speedily destroy those parts to which they are applied: such are the pure alkalies, *potash* and *soda;* the *vitriolic* and *nitrous acids*, or a solution of *silver*, *quicksilver*, or *copper*, in *nitrous acid*. If a solid caustic is wanted, nothing is more convenient than the *lunar caustic* (*nitrated silver*). The milder caustics are more frequently useful than those we have mentioned; such as blue vitriol (*vitriolated copper*), red precipitate (*red nitrated quicksilver*), burnt alum, verdigris, &c.

The strong caustics are employed to destroy unhealthy or diseased parts; but those of the milder kind are very useful for the purpose of bringing obstinate ulcers into a healing state, without any apparent destruction of parts. (See Caustics, Pharm.)

CAYENNE PEPPER. (See Capsicum.)

CENTAURY. This herb is a weak bitter, and of no use in veterinary practice.

CERATE. A term given to certain ointments or salves, in which *wax* is an ingredient.

CERUSS, or *White Lead.* This is sometimes used in ulceration of the heels, when the discharge is thin and acrimonious.

It is generally made into an ointment with hog's lard and oil; but perhaps would be found more useful if merely sprinkled on the part in fine powder.

CHALK should be finely levigated or prepared, as it is termed, before it is given. It is sold by druggists in this state; and is a good remedy in diarrhœa, if joined with opium and ginger, or other cordials. It has been found serviceable also in correcting acidity of the stomach, and in that obstinate diarrhœa which frequently destroys horned cattle.

The dose is from one ounce to two ounces. (See Astringents, Pharm.)

CHARCOAL. A charcoal poultice has been recommended as an application to the heels when affected with grease, with a view, perhaps, to destroy the offensive smell with which that disease is accompanied.

CHIO TURPENTINE. (See Turpentine.)

CICUTA. (See Hemlock.)

CINCHONA. (See *Bark.*)

CINNABAR. A heavy mineral of a dark red colour, sometimes prepared artificially. It is composed of quicksilver and sulphur, and has been employed as an alterative in obstinate coughs and thickness of wind, in doses of half an ounce daily. Cinnabar is the most useless of the mercurials, and may, without impropriety, be dismissed from our Materia Medica.

CINNAMON. This well-known spice is a powerful stimulant, and an excellent cordial: its high price, however, prevents its being used much in cordial preparations; so that when good cassia can be procured, it may be on all occasions substituted for it in veterinary practice.

CLOVES. A stimulant of considerable strength, but seldom employed in veterinary medicine, on account of its high price. The essential oil of cloves is sometimes used, in the dose of twenty or thirty drops, in cordial preparations, or in purgative medicine, to prevent sickness or griping.

COLOQUINTIDA, or *Bitter Apple.* A violent purgative in the human system, but quite inert in the horse, having produced no

perceptible effect in the immense dose of four ounces.

COLLYRIUM, or *Eye-Water.* (See Pharm.)

COLOMBO, the root. A good stomachic bitter, much used in human medicine; and though rarely employed in veterinary practice, seems to be worth a trial in cases of indigestion and flatulency.

The dose is about one ounce: it would perhaps be more effectual if joined with ginger or cassia.

COLTSFOOT. Though this plant was once considered as an useful remedy in coughs, it is now totally disregarded.

CONTRAYERVA. The root is considered by medical practitioners as a mild diaphoretic and cordial, but it is never used in veterinary practice.

COPPER. This metal is a component part of blue vitriol (*vitriolated copper*) and verdigris, two valuable preparations. (See Blue Vitriol and Verdigris.)

CORAL, white and red. These act only as *absorbents*, though formerly accounted *anthelmintic.*

CORIANDER, the seed. A weak aro-

matic stimulant, not used in veterinary medicine.

COWHAGE, or *Cowitch.* A pod produced by a plant growing in the West-India Islands, and other warm climates, where it proves very troublesome to cattle and other domestic animals, on account of the spiculæ which grow upon the surface of the pods: these, when applied to the skin, excite a painful kind of itching. The *down* is said to be a good remedy for worms in the human body. I have given it to a horse in the dose of half an ounce, as a worm medicine, but it did not produce the slightest effect.

CREAM OF TARTAR. (See Acid Tartareous.)

CRETA. (See Chalk.)

CROCUS. (See Saffron.)

CUCUMBER, wild. The fecula or mucilaginous part of the fruit is a violent purgative and emetic in the human subject, but has not been tried in the horse.*

CUMMIN, the seed. A weak stimulant; but its essential oil is an useful cordial and

* I have lately tried this medicine in doses from half a dram to one dram and a half. It produced no visible effect.

carminative, in doses from half a dram to one dram.

DANDELION, though formerly considered as a deobstruent, is now quite neglected, being too inert for any medical use.

DEADLY NIGHTSHADE. This plant has been considered as the most powerful of the narcotic poisons; it has been found, however, an useful medicine, when cautiously employed. Physicians usually prescribe it as a sedative, in doses of five grains, gradually increasing the dose until some perceptible effect is produced. In the horse it has scarcely been tried, nor does it seem likely to supersede *opium* as a *sedative*. The powdered leaves are most commonly employed, but it is also used in the form of extract. The first dose for a horse should be about two drams of the powder, or one dram of the extract, which might be gradually increased.

In human medicine, a *decoction* of the leaves is sometimes employed as a fomentation in cancerous complaints. This might probably be found serviceable in painful tumours, or ulcers of the horse.

DECOCTIONS are made by boiling any

medicine in water until its virtues are extracted. (See Pharm.)

DEMULCENTS. Medicines which have the power of diminishing the effect of acrimonious or stimulating substances upon the sensible parts of the body. There are two sorts of demulcents: the one, possessing an oily or mucilaginous quality, sheathes the sensible part, and thereby defends it from the action of the stimulus; the other, being a watery fluid, dilutes the stimulus, and diminishes in a certain degree its power. Among the former may be reckoned, gum arabic, gum tragacanth, and marshmallow, with various oils: the latter consists principally of water.

DEOBSTRUENTS. Medicines that remove obstructions.

DETERGENTS. A term employed in surgery, for those applications which have the power of cleansing foul ulcers, and inducing a disposition to heal.

DIAPENTE. A compound powder much used by farriers, as a tonic, or stomachic. It is composed of gentian root, bay berries, birthwort, myrrh, and shavings of ivory, of each equal parts: the last article, as well as

the myrrh, are now generally omitted. This powder is very inferior to those formulæ or receipts which may be found in our Pharmacopœia. (Art. Tonics, and Stomachics.)

DIAPHORETICS. Medicines that increase the natural discharge by the skin; which, when they act in so considerable a degree as to occasion sweating, are termed *sudorifics.*

It is extremely difficult to produce any visible effect upon the horse's skin by means of medicine alone; but when it is assisted by proper exercise and warm clothing, we can generally give a fine glossy appearance to the coat, though it is very difficult to produce sensible perspiration, unless it be by violent exercise and immoderately warm clothing. The most effectual diaphoretics in the horse medicines are of the hot stimulating kind, combined with antimonial preparations and opium: these, however, can seldom be employed with propriety in the fevers of horses, which are generally an effect of internal inflammation; they are useful only when horses are hide bound, have a rough dry coat, and ap-

pear in a state of debility. The effects of this class of medicines are so very uncertain in the horse, and so rarely succeed unless assisted by exercise, that it seems probable that exercise, a proper diet, and good grooming, form the only effectual Diaphoretic. (See Compendium: article Fevers. Pharm. article Diaphoretics.)

Emetic tartar, and other preparations of antimony, Minderus's spirit, and camphor, are the diaphoretics which are employed in febrile complaints.

DIET. Nothing tends more to the preservation of the horse's health, than proper management with respect to his diet, in the regulation of which, it is necessary to consider the exertion or labour that is required from him.

It is a mistaken notion, that horses possess the highest degree of strength, of which they are capable, while running at grass, in a state of nature; for there can be no doubt that the natural strength might be considerably augmented by high feeding and proportionate exercise, provided it is done gradually.

When a horse, however, is kept upon a

full diet, and not allowed sufficient exercise, many dangerous diseases are engendered: to this cause may be attributed the frequency of his inflammatory complaints, and his most dangerous fevers may often be traced to this source; hence also originate swellings of the legs, grease, cough, inflamed eyes, and many other evils.

If a horse's work is moderate, his diet should be so likewise; but when his work is irregular, that is, when he is employed only once or twice a week, and then in hunting, or some violent and long-continued exercise, his diet must be such as to render him at all times adequate to his work; above all things, regular exercise in the intermediate days is indispensably requisite.

Horses that work hard, and constantly, should always be allowed a moderate quantity of beans with their oats; but on no occasion is barley a proper article of diet.

This subject will be found more fully treated of in the Compendium.

* It is probable that barley may, by proper management, be given to horses without inconvenience. The stomach should be gradually brought to it; and to render it more easy of digestion, it should be coarsely ground, or merely broken, and mixed with an equal quantity of bran.

DIGESTIVES. Medicines which promote suppuration in ulcers, and cause them to discharge a white healthy matter. (See Pharm.)

DIGITALIS. (See Fox-Glove.)

DITTANY OF CRETE. The essential oil of this plant resembles that of origanum, and may be employed for the same purposes. (See Origanum.)

DIURETICS. Medicines that increase the secretion of urine; an effect more readily produced in the horse than in the human body. There is a great variety of medicines that act as diuretics: the principal are, the various kinds of turpentine, balsam, soap, the fixed alkalies, nitre, &c.

Diuretics are much used in veterinary practice, particularly in diffused swellings of the legs or other parts, and grease: when given in moderate doses, they may be continued for several days; and a horse may work without danger during their operation. The diuretic alterative in our Pharmacopœia is an excellent medicine for horses that are subject to swelling of the legs, and in slight cases of grease: but in more violent complaints we must employ more active reme-

dies, these being adapted only to mild cases which do not prevent a horse from working.

DRAGON'S BLOOD. A resinous substance of a dark red colour, which, when *pure*, is entirely soluble in spirits of wine. Dragon's blood was formerly employed as an astringent and styptic, in fluxes and internal bleedings; but modern practitioners scarcely ever use it. It is still employed by farriers, in the complaint of horned cattle which they term *red water*, or bloody urine, but without effect; nor is there any disease of the horse in which it is likely to be useful.

DRASTIC. A term applied to purgative medicines that are violent in their action.

DRAUGHTS, or *Drafts*. (See Drench.)

DRENCH. A medicine in a liquid form. This is a very inconvenient method of giving medicine to horses, some part of the dose being generally wasted. It is preferable, however, on many occasions, to every other form, on account of the medicine acting in much less time than in a solid form: in flatulent colic, or gripes, for example, where the symptoms are extremely urgent and alarming, a proper *drench* will soon re-

lieve the animal, while a *ball* would require several hours to produce any effect. Farriers commonly compose their drenches with ale, whatever the qualities of the other medicine may be, which is extremely absurd; since the properties of the liquid should always correspond with the virtues of the other ingredients. *Cordial drenches*, therefore, may with propriety be made with ale, but those of a contrary tendency should be mixed with water-gruel, or water.

The best instrument for giving drenches is the horn of an ox; the opening being cut obliquely in the form of a spout. Bottles are sometimes used on an emergency to give drenches; but they are attended with danger, and should be handled cautiously. In giving a drench, the horse's tongue should be held with the left hand; and when the head is sufficiently elevated, the medicine is to be carefully poured into the throat, immediately letting go the tongue, while the head is kept up until the drench be swallowed. Drenches are very seldom given with dexterity, and great part of the medicine is sometimes wasted. Every groom should

learn to give them with facility, and always keep a proper instrument in the stable.

EARTH. Horses at camp or grass are sometimes disposed to eat considerable quantities of earth: this should always be prevented, if possible, as it sometimes accumulates, and forms large balls in the intestines, which generally destroy the animal. Horses employed in mills for grinding have been often destroyed in this way. (See Absorbents.)

EGGS. These have been recommended for the improvement of a horse's wind; but they certainly do not possess any quality of that kind. They are also used for the purpose of mixing oils, and balsams, with water.

ELATERIUM. This preparation of the wild cucumber acts on the human body as a most violent cathartic, and is seldom given in larger doses than one grain. I gave a healthy horse, that I purchased for the purpose of making experiments, half a dram, or 30 grains, at one dose, which did not produce the slightest effect: it did not even diminish the appetite, or move the bowels

or kidneys. After an interval of 24 hours, I gave the same horse one dram and a half, or 90 grains, which proved equally inert.

ELECAMPANE. The root of this plant is a weak aromatic stimulant, and formerly recommended in coughs, to promote expectoration: farriers use it for the same purpose; but, as we have many medicines of this kind of greater efficacy, it hardly deserves notice.

ELDER. The leaves and blossom are employed: the former in the preparation of an ointment and oil of a green colour, and of little or no use; the latter is used in making a white ointment, formerly recommended in inflammatory affections of the skin, &c., but not more efficacious than simple fat, or lard. There is also a distilled water made from it, which is often employed in the composition of eye-waters, but does not appear to possess any medical qualities that do not exist in simple or distilled water.

ELECTUARY OF SENNA, or *Lenitive Electuary*. This is an useful laxative in the human body; but, though recommended for the same purpose in the horse by writers on

farriery, is certainly too weak to produce any effect, though given in the dose of a pound. (See Senna.)

ELEMI GUM. A resinous substance, sometimes employed in the composition of digestive ointments.

ELIXIR, PAREGORIC. A preparation of camphor and opium, but in too dilute a state to be adapted to veterinary practice.

EMBROCATIONS. (See Pharm.)

EMETICS. Medicines that excite vomiting. It is very generally believed that horses are incapable of vomiting: I have met with one instance, however, where it occurred spontaneously, and was soon after succeeded by purging.

Medicines that are considered as the most violent emetics in the human system, are generally inert in the horse. A remarkable example of this may be noticed in white vitriol (*vitriolated zinc*), of which a horse has taken twelve ounces at a dose, without much effect.

EMETIC TARTAR, or *Tartarized Antimony*. A preparation of antimony (See Antimony) and cream of tartar (See Acid,

Tartareous). This is a violent emetic in the human subject, even in the quantity of one or two grains: but in more minute doses it is used as a febrifuge.

In the horse it is a very safe medicine, and useful in fevers: it is generally given in doses of two drams, which may be repeated every day, or even twice a day should the case require it: when the bowels are affected by it, a small quantity of opium may be added: many practitioners join with it camphor and opium, or camphor and nitre, both of which are often highly useful. Emetic tartar seems to be the best of the antimonial preparations, though others are occasionally preferred: but there is some difficulty in deciding this point; for all the preparations of antimony have so little activity in the system of the horse, that their effects are not often perceptible: we know them to be useful, however, from their frequently subduing or mitigating the disease for which they are employed. Whenever *emetic tartar* is given, or any other antimonial, its effects will in great measure depend upon the attention and management of the groom. In fevers, the horse should be well

littered, and clothed with a rug or blanket, of sufficient width to cover the belly as well as the back. The neck, head, and chest, should likewise be clothed: the clothing, however, must be regulated by the season of the year, and the temperature of the air. The legs should be well hand-rubbed several times a-day, and warm water given. When the antimonial is given to remove surfeit, or relax the skin, it may be materially assisted by exercise and moderately warm clothing.

A late writer on farriery recommends one ounce of *antimonial wine*, with a decoction of rue and camomile, as a remedy in inflammatory fever. This quantity of antimonial wine contains about four grains of emetic tartar; a dose too minute to produce any effect upon the horse.

EMULSION. A term given to preparations in which oil is blended with water, by means either of mucilage, the yolk of an egg, or a small quantity of alkali. (See Alkali.) Emulsions have a milky appearance, and are a convenient vehicle for pectoral medicines, being supposed to possess that quality in some degree.

ENEMA. (See Glysters.)

EPISPASTICS. (See Blisters.)

ERYNGO, the root. A weak aromatic stimulant, of no use in veterinary medicine.

EPSOM SALT, or *Vitriolated Magnesia.* A neutral salt, formed by the combination of magnesia and vitriolic acid. It is commonly obtained from the water of certain springs, in which it is formed by nature. The virtues of this salt are similar to those of *Glauber's salt.* (See Glauber's salt.)

ESSENCE. This term is applied to essential oils, and very properly, since they generally contain all the medical virtues of the substance from which they are extracted.

ESSENCE OF PEPPERMINT. The preparation sold in the shop by this name, is made by dissolving a small proportion of oil of peppermint in rectified spirit, or alcohol, that has been previously tinged with some green colour.

ESSENCE OF MUSTARD appears to be composed of camphor, oil of rosemary, and oil of turpentine, which form a good stimulating embrocation.

ESSENTIAL OILS. The smell, taste, and other qualities of vegetables, frequently reside in a volatile oil, particularly in those vegetables, or certain parts of vegetables, that have a strong odour and taste; as mint, pennyroyal, peppermint, lavender, caraway seeds, anise seeds, juniper berries, lemon-peel, santal wood, &c. This oil being volatile, may be extracted, and procured in a separate state, by distillation; and as it contains all the useful qualities of the substance it was obtained from, is termed an *essential oil*, which is found very convenient in medicine, particularly for veterinary purposes.

ETHER. This is the most volatile liquid we are acquainted with, and evaporates readily in the common temperature of the atmosphere; it must be given, therefore, with great expedition, or a considerable part of the dose will be lost by evaporation. It is a powerful antispasmodic, and may be given with advantage in obstinate cases of flatulent colic, and other spasmodic complaints. On some occasions it is joined with tincture of opium, or camphor, with good effect.

The dose is about one ounce, which should be mixed with a pint of water.

The high price of ether prevents its being much used in veterinary medicine. It is a powerful remedy, however, when properly applied; and may be considered as an important medicine.

ETHIOPS MINERAL. A preparation made by rubbing equal parts of quicksilver and flower of sulphur together, until the mixture becomes black, and the quicksilver invisible.

Ethiops Mineral was formerly considered a very useful medicine; capable of destroying worms, and curing chronic eruptions, and other diseases of the skin. At present it does not appear to be valued much by physicians for any purpose: but whatever its virtues may be in the human body, it is certainly very inert in the horse; and though still employed by farriers as an anthelmintic and alterative, is unworthy of notice, while we can procure so many valuable preparations of quicksilver.

EUPHORBIUM. A gum resin, that exudes spontaneously from a large oriental tree. It is brought to us in small drops, of

a pale yellow colour, which are generally mixed with woody and other extraneous matter.

Euphorbium is found useful in veterinary practice, as an external application. It is generally employed in the form of tincture; sometimes it is mixed into an ointment with hog's lard, mercurial ointment, oil of origanum, oil of bay, &c., being previously reduced to a fine powder. It is also frequently an ingredient in strong blisters, to which it proves a powerful auxiliary. In whatever form euphorbium is employed, it proves extremely acrimonious and stimulating, and is therefore well calculated to reduce callous swellings of the back sinews, or other parts; curbs, windgalls, &c.

The tincture is made by digesting, or steeping, one ounce of the powder in four or six ounces of rectified spirit; frequently shaking the bottle which contains the mixture, and keeping it in a warm place; after eight or ten days it is to be strained off, and kept well corked. Some add to this a little oil of origanum, or camphor. There is another kind of tincture, made by digesting the powder in a strong solution of potash, which

also acts very violently. In powdering euphorbium, the mortar should be placed where there is a current of air, that the dust which arises might be blown off, otherwise it would get into the nostrils, or throat, and prove excessively troublesome.

EXERCISE. We have observed, under the article *Diet*, that the horse's exercise should be always proportionate to the quantity and quality of his food; or rather, that the latter should be adapted to the former, in order to preserve him in health. We have further to remark, that in other points of view exercise is of great importance. In training horses for the turf or the chase, it is by *exercise* properly conducted, and a well-regulated diet, that we enable him to perform those wonderful exertions that are required from him, and bring his wind to the highest degree of perfection which it is capable of attaining. In training a horse, whether he be designed for the turf, the chase, or the army, this precaution must always be observed,—that his exercise never exceeds his strength. Many horses have been destroyed by neglecting this precaution, particularly in the army, where we too

often see horses recruited of three years old. When first brought to the regiment (perhaps from a considerable distance), they are weak and out of condition, often suffering from strangles, which, from their weak state, do not come forward properly, but affect chiefly the internal part, causing pain and difficulty in swallowing. At this time they are unfit for any kind of work, and require a month to be brought into proper condition for the riding-school. On the contrary, they are not, in general, allowed half that time, but are brought too hastily into the school, without taking time to reflect, that as they are quite unaccustomed to that, or, indeed, any kind of work, it becomes excessively fatiguing; and to young horses in a state of debility, particularly if they are not immediately attended to, and taken great care of when brought sweating from the school, I am convinced it is often attended with destructive consequences. Exercise, therefore, should always be moderate at first, and adapted to the animal's strength: by increasing it gradually, and in proportion to his condition, he may soon be brought to bear, without inconvenience, that degree

of exertion, and velocity of motion, for which he is wanted. Exercise not only prevents disease, but materially assists in the cure of many: thus, in swellings of the heels and legs, grease, inflamed eyes, &c., medicine, without proper exercise, seldom effects a cure. (See Compendium, where this subject is more fully considered.)

EXPECTORANTS. Medicines that increase the discharge of mucus from the lungs, and thereby relieve cough and difficulty of breathing. There are many medicines which produce this effect in the human body; but in the horse the action of *expectorants* is not easily perceptible. It has been said, that as a horse breathes only through his nostrils, the effect of such medicines (if they had any) would be shewn by a discharge from the nostrils; and as they are not observed to cause such discharge, they must be ineffectual: but in coughing, air is expired by the mouth; and it is not improbable that mucus may be discharged by the lungs at the same time, though this point is difficult to be ascertained with precision. I am convinced, however, that some

of the medicines termed expectorants, frequently prove serviceable in the horse, by relieving or curing cough and difficulty in breathing, or what is termed thickness of wind: among these are squill, and gum ammoniacum; both which I have often found very beneficial in those complaints, although, as we have seen, I cannot say in what manner they operated.

EXTRACT SATURN. (See Goulard.)

EYE-WATERS. (See Pharm.)

FEBRIFUGE. A term given to medicines that moderate or lessen the violence of fever.

FENNEL. The seeds of sweet fennel are in some degree stomachic and carminative, in doses from one to two ounces. The essential oil they afford possesses the same quality in a stronger degree.

The dose is from half a dram to one dram.

FENUGREEK. The seeds only of this plant are employed for medicinal purposes: by reason of their mucilaginous quality, they are used in making poultices, and sometimes in emollient glysters. Farriers often give them internally, with what view

I cannot pretend to say; since they do not appear to be adapted to the cure of any complaint.

FERN. The root of male fern was formerly considered as a remedy for worms, particularly the tape-worm: it seems now, however, to have got into disrepute. I have never heard of its being tried in horses, nor does it seem to deserve our attention.

FERRUM. (See Iron.)

FIGS. Mr. Taplin, who some time ago wrote so much *about* "Farriery," recommends figs and liquorice in his pectoral drinks for inflammation of the lungs! a disease that requires the most powerful remedies. Figs certainly do not possess any medical qualities worth notice.

FIRING. A severe operation often performed on the horse, and on some occasions highly useful. It consists in the application of a red-hot iron to the skin, so as to burn without penetrating through it. The violent inflammation this occasions, rouses the absorbent vessels into action, by which callous or even bony swellings are sometimes dispersed. The diseases in which it is most

efficacious are spavins, ring-bones, old callous swellings about the back sinews, in consequence of strains and windgalls. Firing is supposed to brace the skin, and cause it to act as a bandage on the subjacent parts. A blister is often applied to the part immediately after firing, or on the following day, to render it more effectual. It is necessary to observe that the milder remedies should always be tried before this severe operation is had recourse to. Firing has been recommended for the purposes of strengthening the back sinews and hocks of colts, to prevent strains, and what is termed breaking-down; but it is difficult, if not impossible, to conceive how the workmanship of the Deity can be improved by such means.

It has been asserted, that when firing is employed for old callous swellings of the back sinews, the swelling should be previously reduced by blistering; that firing would then prevent any return of the complaint; whereas if the firing were performed in the first place, it would tend to fix the swelling, and render it incurable. I do not believe there is any ground for this opinion.

The hot iron is the most effectual remedy for those ulcers of the skin which depend upon farcy or glanders.

FIXED AIRS. (See Carbonic Acid Air.)

FIXED ALKALI. (See Alkali.)

FLAG, or *Yellow Water-Flag*. The juice of this plant, which grows plentifully near rivers, is a strong purgative in the human system, but has not been tried in the horse.

FLIES, SPANISH. (See Cantharides.)

FLOWER OF SULPHUR, or *Brimstone*. This is much used by farriers as an ingredient in alterative medicine. It is procured from the impure brimstone or sulphur, which is found in the neighbourhood of volcanoes, by *sublimation*.

Flower of Sulphur is not perfectly pure however, it still retains a small quantity of vitriolic acid and other impurities, which may be carried off by washing; it then forms the milk of sulphur, or washed sulphur, of the shops.

Flower of Sulphur is sufficiently pure for veterinary purposes, and is generally given in the dose of one ounce: it is commonly joined with nitre and antimony, or nitre and resin; and is then thought to improve

the coat and general condition of the horse, or remove swellings of the heels, and surfeit. I have given sulphur in a variety of doses from one ounce to eight ounces daily : but the only effect I could perceive was that of a mild laxative, and that did not take place until four ounces were given at a dose. It made no alteration in the coat or skin, though the patients were hide-bound, and had rough dry coats. From the observations I made on this occasion, I do not conceive that *sulphur* is of much use as an internal remedy in the horse, or that it possesses any diaphoretic power. As a topical application in mange, it is certainly very efficacious, particularly if mixed with other remedies. (See Pharm. article Ointment for mange. See also Index.)

Sulphur is very serviceable to young dogs, when they have any appearance of plethora or cutaneous disease, generally acting as a mild laxative : it may be given to them in milk, from one tea-spoonful to two or three.

FLOWERS OF BENJAMIN. These are procured from gum Benjamin, or Benzoin, by sublimation. They are of a beau-

tiful white colour, very fragrant, and extremely light. In human medicine they are employed as a remedy for coughs and other pectoral complaints; but they are scarcely ever used in veterinary practice: a sufficient dose for a horse would be very expensive, and it is probable that gum Benjamin would answer every purpose that can be obtained from the flowers. (See Benjamin, Gum.)

FLOWERS OF ZINC. These also are obtained by sublimation from the metal named zinc. This medicine is said to possess a considerable tonic power. It has not, however, been given to horses, nor is it probable that it would be found an useful medicine; since white vitriol (*vitriolated zinc*), a more active preparation of the same metal, has been given to the amount of eight ounces and more, without producing any sensible effect; but it is said that in small doses, from half an ounce to one ounce, white vitriol discovers a tonic quality.

Should any one be inclined to try the flower of zinc, they may safely begin, I think, with the dose of half an ounce, and gradually increase it until some effect is

observed. The diseases to which it is adapted are those arising from debility.

FOXGLOVE. A poisonous plant, which grows plentifully in this country, chiefly in elevated dry situations. The leaves were formerly employed as an application to ulcers and scrophulous tumours; but from its deleterious quality, was seldom used as an internal remedy. *Foxglove* is now found to possess a remarkable power of diminishing the frequency of the pulse, therefore it will probably be found a valuable medicine in those *internal inflammations* which so frequently occur in horses: their most dangerous fevers depend on this cause; and when the inflammation attacks an important part, such as the lungs or bowels, it generally terminates fatally, unless the most powerful remedies are employed at an early period. *Foxglove*, on these occasions, would perhaps greatly assist the other remedies, particularly in inflammation of the lungs. It has been lately introduced into veterinary practice, but was not attended with the expected success. The complaint in which it has been chiefly employed, is swelling of the legs; but it does not appear to do much

good. I have several times given it by way of experiment; and though I cannot say in what particular cases it will be found curative, yet I am of opinion, from the observations I then made, that it will be found, under proper management, a valuable remedy in those fevers which depend on internal inflammation, as also in catarrh, when the inflammatory symptoms are considerable. I believe no one will dispute, that if we can find a method of diminishing inflammatory action in the internal organs, without depriving the system of so great a quantity of the vital fluid as is found absolutely necessary on such occasions, it will be an invaluable discovery. No medicine appears better adapted to this purpose than *foxglove*; and it is to be hoped that its virtues will soon be thoroughly investigated.

Foxglove is an active medicine in the horse, and cannot be given with perfect safety in larger doses than half a dram; but this must be gradually increased, until some effect is perceived: the horse, however, must be carefully watched, that the effect may be seen; for if too much be given, the stomach is sometimes materially injured.

FRANKINCENSE. A resinous substance, similar to yellow resin, as to its medical qualities.

GALANGAL, the root. This is a warm stomachic bitter, calculated to remove indigestion and flatulency, and to promote the appetite.

The dose is about an ounce.

GALBANUM. A gum resin; similar in its medical qualities to gum ammoniacum, but inferior in efficacy.

The dose is about six drams.

GALLS. An excrescence from the oak tree, produced by the puncture of an insect. *Galls* are powerfully astringent, but not often employed internally; they may however prove useful, in conjunction with other remedies, in suppressing obstinate diarrhœa.

The dose from two drams to four.

GAMBOGE. A yellow resinous substance, which in the human system acts as a violent purgative; sometimes as an emetic also, even in small doses. In the horse it is not much employed, I believe scarcely ever; but I have found it to be an useful medicine in worm cases, facilitating the operation of aloes, and considerably increasing

their purgative quality. (See Anthelmintics, Pharm.)

The dose of *gamboge*, when given without aloes or any other purgative, is from three to four drams; which should be mixed with three drams of Castile soap.

GARLIC. This is often employed by farriers as a remedy for coughs and thickness of wind; and I believe that in coughs of the chronic kind it has sometimes been found efficacious.

The dose is from one to two ounces.

The cloves are separated and pounded in a mortar until they form a sort of paste, which is formed into balls with liquorice powder: sometimes they are boiled in milk, and given in the form of a drench.

GENTIAN, the root. A strong and very pure bitter, well calculated to remove weakness of the stomach and indigestion. It generally requires to be joined with stimulants; such as ginger, cassia, myrrh, cascarilla, &c.; and when any acidity is suspected to exist in the stomach, a small quantity of *soda* is an useful addition. Gentian is the basis of that famous horse powder termed *diapenté*. Gentian root sometimes

becomes rotten and useless: the purchaser should therefore examine before he buys, and choose such parts as are sound, rather tough, and extremely bitter. It is to be feared, that the powdered gentian of the shops is not so good as it should be; and it is to be lamented that druggists in general think any thing good enough for horses.

The dose of pure gentian is from three drams to six. (See Pharm. article Tonics and Stomachics.)

GERMANDER. A low shrubby plant, bitter, and somewhat astringent; but not sufficiently strong for veterinary purposes.

GINGER. A root brought from China and the East and West Indies.

There are two sorts kept in the shops; the black, and the white ginger: the latter is preferred for culinary purposes, on account of its more pleasant flavour, but the former seems to be equal, if not superior, in strength; and being considerably cheaper, and more easily powdered, I think it deserves a preference as a horse medicine.

I consider ginger as the most useful stimulant in the veterinary materia medica: when joined with aromatics, caraway seed, anise

seed, cummin seed, &c., or their essential oils, it forms an efficacious cordial, and with emetic tartar and opium an excellent diaphoretic, for giving gloss to the coat, and relaxing the skin. Joined with bitters, it makes a good stomachic; with squills an expectorant, often relieving obstinate coughs.

Ginger is extremely beneficial in weakness and flatulency of the stomach; and assisted by other remedies, such as oil of juniper, or camphor, it seldom fails of curing the flatulent colic, or gripes.

The dose is from one dram and a half to three or four drams.

It should be recently powdered when used; but in a well-stopped bottle the powder may be kept a considerable time without losing its strength.

GINSENG. A moderately warm aromatic root, highly esteemed by the Chinese, but in this country scarcely ever employed.

GLAUBER'S SALT, or *Sulphate of Soda.* This neutral salt is composed of the vitriolic acid and soda, or the mineral alkali which is now termed soda in the London Pharmacopœia. In the human subject it is an efficacious purgative; but in the horse

extremely inconvenient, on account of the large quantity required to produce a laxative effect.

The dose is from half a pound to a pound.

GLYSTERS. This form of medicine is extremely useful, though much neglected. It is unnecessary to describe the mode of administering them; and with respect to the various medicines employed in this way, I must refer the reader to the Pharmacopœia. (See Glysters.)

The best instrument for the purpose is a polished pewter tube, about one foot in length, the bore about half an inch in diameter: one end of this tube is to be so made that a bladder may be securely fastened to it, the other finely polished, so that there may be no danger of wounding the intestine. The bladder which is fixed to it should be large enough to contain a gallon, at least, or six quarts.

GOLDEN SULPHUR OF ANTIMONY. This preparation of antimony is scarcely known to farriers; and I believe seldom used by veterinarians. It may be found useful, however, in obstinate diseases of the skin, either alone or joined with mer-

curials, such as calomel, or sublimate, *muriate of quicksilver.*

The dose is from one dram to two: perhaps even more may be given with advantage; but it is adviseable to begin with a small dose.

GOULARD'S EXTRACT. Extract of saturn, or lead. This is made from litharge and vinegar, by simmering them together over a gentle fire, until the vinegar has dissolved as much as it is capable of. Goulard, therefore, is nothing more than a solution of litharge in vinegar. It is a very useful application in cases of external inflammation, and may be used either as a lotion or in the form of poultice. Goulard lotion is made by mixing half an ounce of the extract to a pint of water: some add to this a little camphorated spirit, or some distilled vinegar; but when the lotion is intended for the eyes, there must be a much larger proportion of water, not less than a quart.

Goulard poultice is made by mixing as much of the lotion, with bran, linseed, meal, or any proper materials for poultice, as will give them a proper consistence. (See Poultices and Lotions, Pharm.)

Goulard is never used undiluted, nor is it given internally.

GRAINS OF PARADISE. A warm stimulating seed, often used by farriers, in the diseases of horned cattle, as a cordial; and where medicines of that kind are required, it is certainly very proper: but it is very necessary to consider the case well before this medicine is employed; for if the complaint be of an inflammatory nature, grains of Paradise, being a powerful stimulant, may do much injury.

The dose is from three to six drams.

GROUND IVY was formerly considered as an excellent remedy in pulmonary complaints; but it is now disregarded by medical practitioners, and is certainly useless in veterinary practice.

GUAIACUM. The wood and resin. The former is sometimes employed in human medicine, as an ingredient in alterative decoctions, but never in veterinary practice. The resin, commonly called gum guaiacum, is sometimes used as an alterative. Farriers employ it also in what they suppose to be rheumatic lameness; but without any advantage, I believe. Rheumatism seldom attacks

horses: when it does occur, purgatives, with moderate exercise, are the best remedies.

The dose of gum guaiacum is from half an ounce to six drams.

There is a volatile tincture of guaiacum sold in the shops, which seems better adapted to rheumatic complaints than the gum alone; but its use should be preceded by a purgative.

The dose is one ounce and a half.

GUINEA PEPPER. (See Cayenne Pepper.)

GUM. There are various kinds of gum, which may be distinguished by their solubility in water, and by forming therewith a mucilage. The principal are; gum arabic, gum dragent, and India gum. The two first are the best. Gum dissolved in water makes useful drinks in inflammatory complaints of the bowels, kidneys, bladder, and lungs.

GUM RESIN. A natural mixture of gum and resin.

HARTSHORN. The horns of stags were formerly supposed to possess peculiar qualities; but upon a chemical analysis they are found to be very similar to bone, which is now substituted for it upon all occasions.

HARTSHORN. Spirit and Salt. (See Ammonia.)

HAY. Clover and the coarser kinds of hay are said to be best adapted to draft-horses, and such as are employed in slow but laborious exercise; while saddle-horses are thought to do better with the finer kinds of hay. I believe, however, the former is most nutritious; and if the quantity allowed is suited to the horse's employment, it may be given to every kind of horse with advantage.

HELLEBORE, white and black. The root of this plant, particularly the white hellebore, is extremely acrimonious; for if wounded while fresh, it emits a juice capable of blistering the skin.

Powdered white hellebore is often employed as an ingredient in blisters. It is used also in ointments for the mange, and other cutaneous diseases. A decoction of white hellebore is often employed for the same purpose; but other medicines are generally added to it; as sulphur vivum, turpentine, white vitriol, or alum. Hellebore has been tried as an *internal* remedy in the horse; but its effect was so violent, even in

the small dose of half a dram, that it is now considered a very dangerous medicine.*

BLACK HELLEBORE is never used in horse medicine.

HEMLOCK. A strong narcotic; but on many occasions an useful medicine, possessing, like opium, an anodyne quality, but not so certain in its effect. It is said, however, not to produce costiveness, like opium; and as far as I have been able to judge, this observation holds good with respect to the horse. The complaint in which it has been chiefly employed in veterinary practice, is obstinate cough, depending upon irritability, in which it often proves serviceable.

* I have lately had an opportunity of trying the effect of white hellebore, and did not find it so violent or so dangerous as it was said to be after an experiment made at the Veterinary College. To a glandered horse we gave half an ounce of the powder of white hellebore, expecting it would destroy him; but it produced no effect: an ounce was then given, which caused an appearance of sickness, and a copious discharge of saliva from the mouth. It was given afterwards to several horses; and we uniformly found that in the dose of half an ounce given daily, it produced the effect we have just described. In some, the first dose caused an appearance of sickness and salivation; others took several doses before any effect was observed. It was given daily in a case of farcy, in the dose of half an ounce, and the horse got well: no other remedy was employed except blisters: in none of the experiments did it cause any dangerous symptoms.

The leaves are to be carefully dried and powdered. The powder must be kept in a well-stopped bottle, from which the light should be excluded.

The dose is about a dram; but it may be gradually increased to a much larger quantity.

There is an extract made from hemlock, which, when prepared, is a very convenient form, and not less efficacious than the powder.

The dose is about a dram; but this also may be gradually augmented to a considerable quantity.

A decoction of green hemlock is said to be an useful fomentation in painful wounds and tumours.

HENBANE. This plant also is a powerful narcotic, and free from the constipating effect of opium. It has not hitherto been used in veterinary medicine, though likely to be found beneficial. I have tried a solution of the extract in water, in chronic inflammation of the eye, where the interior parts were very irritable; and I think with good effect. It certainly deserves a farther trial in this way.

The seeds are said to be the most power-

ful part of the plant; but the powdered leaves and the extract are more commonly employed.

HOG'S LARD. An article of some importance in veterinary surgery, being the basis of almost every ointment.

HONEY. A small quantity of honey dissolved in linseed infusion, is often used in those troublesome coughs which arise from irritation, and serves in this way as a good auxiliary to more important remedies. Honey is sometimes added to a solution of alum, as a lotion for the mouth, when it is inflamed and sore.

HOREHOUND. A bitter herb, with some degree of roughness or astringency.

Horehound is rather a popular remedy for obstinate coughs, asthmas, and other complaints of the lungs, but has been very seldom employed in veterinary practice: it may however be used in chronic cough, when the usual remedies fail, either in the form of powder, or decoction.

No great precision is necessary in adjusting the dose; one or two ounces of the powder, or a quart of the decoction, may be given at once.

HORSE-RADISH. The root of horse-radish, when fresh, is a powerful stimulant. All its virtues may be extracted by distilling the root with water, or spirit; in which state it may be kept a long time without losing its strength. Horse-radish water, with a small proportion of spirit, is a good medicine in cases of flatulency and indigestion, and is the most convenient form in which it can be given.

HYSSOP. This plant has been esteemed as a *pectoral*, but it is seldom employed in modern practice; nor as a veterinary medicine is it worth notice.

INFUSIONS. A medicated liquid, made by pouring boiling or cold water on any medicine whose virtues it is capable of extracting.

INDIAN PINK. Though the root of this plant is often employed for the purpose of destroying worms in the human body, yet it does not seem at all adapted to the same purpose in the horse.

IPECACUANA. There are few medicines of greater importance in medical practice than the root of ipecacuana: but it has so little effect on the horse, though given in

very expensive doses, that it is not likely ever to be considered as an article of our Materia Medica. Its principal use, in human medicine, is to excite vomiting; an effect it cannot produce in the horse in the largest dose. Combined with opium, it acts as a sudorific in the human body; but for the horse we do not know any medicine, I believe, that is capable of exciting *sensible* perspiration, or sweating, with any degree of certainty; though it is easily brought on by violent exercise or immoderately warm clothing, and sometimes happens spontaneously. Still, however, ipecacuana may promote the *insensible* perspiration, like emetic tartar; and opium may be an useful addition to it.

A mixture of opium, ipecacuana, and vitriolated tartar, (one dram of the two first, to one ounce of the last,) forms the celebrated *Dover's Powder* (*Compound Powder of Ipecacuana*), which has been recommended by a late veterinary writer.

ISINGLASS. This is said to consist of the dried membranes of the sturgeon, or some fish resembling it: the mode of preparation, however, is kept a profound secret.

When dissolved in water it forms a strong mucilage; which is an useful emollient, and serves to sheathe the bowels, bladder, &c., when inflamed or irritated.

IRISH SLATE. An earthy substance, not used in veterinary practice.

IRON. A metal found abundantly in almost every country; but scarcely ever in a pure metallic state, to which it is brought by various artificial processes.

Iron is the basis of several medicines; all of which in the human system act as powerful tonics: but in the horse this quality does not appear in so high a degree, and frequently is not perceptible. The preparations of iron are green vitriol (*ferrum vitriolatum*), muriate of iron, rust of iron, tartarised iron, and others, each of which will be described in its proper place.

JALAP. In the human body, the root of jalap is a certain and efficacious purgative; and there is scarcely a book on farriery in which it is not recommended as an ingredient in purgative balls or physic; which practice is still followed by farriers, who generally put two or three drams of jalap into every dose of physic. It has been ascer-

tained, however, first at the veterinary college; that jalap has no purgative effect on the horse, though given in considerably larger doses than farriers ever employ: but I have observed, that in a very large quantity it occasions sickness, and some degree of purging, though its effects in this way are by no means sufficient to induce any one to employ it as a purgative.

I once gave eight ounces of jalap at one dose to a glandered horse, that was in other respects healthy, and had not been taking any other medicine: in about six hours the horse appeared sick, and in pain; he refused both food and water; during the night he appeared to have had some small watery stools, several of which were perceived also the next day; but they were in very small quantity, and accompanied with pain. The sickness continued all this day, and on the following he recovered.

Hence we find that jalap may with justice be dismissed from our Materia Medica.

JAMAICA PEPPER, or *Allspice*. This is a good carminative, though not very powerful. It may be given in doses from half an ounce to an ounce, in flatulency of the sto-

mach and bowels, and may be used also as an ingredient in cordial medicines.

JAMES'S POWDER. Though the preparation of this medicine has been hitherto kept secret, there is no reason to doubt its being composed chiefly of antimony, and nearly the same thing as that which is sold in the shops by the name of *Antimonial Powder*. (See Antimony.) I can venture to assert, that, as a horse medicine, this is as useful and efficacious as *James's Powder*. It is said to be an excellent medicine in fevers of every kind; and though usually given in the small dose of a scruple, or half a dram, may be exhibited with perfect safety and better effect in a much larger quantity. I never give less than two drams, and sometimes three; and I have seen even one ounce given at a dose without the least inconvenience. It seems to act on the skin like emetic tartar, and promote the insensible perspiration; but I do not think it so certain in its effect as emetic tartar: it is sometimes joined with opium, camphor, nitre, or ginger, according to the nature of the disease: with ginger it forms a good medicine for horses that are hide-bound; but this com-

pound is not proper in fevers, or any complaint arising from inflammation.

JAPAN EARTH,—improperly so called, being an extract of an Indian plant. It possesses a considerable astringent power, and is sometimes found beneficial in those *diarrhœas* or loosenesses which are caused by weakness and relaxation of the intestines.

It may be employed also in *diabetes*, or profuse staling, with alum, opium, ginger, or other remedies suited to the particular circumstances of the case.

The dose is from two drams to three or four.

JESUITS BARK. (See Bark.)

JOHNSWORT. There is an oil of Johnswort kept by druggists, which appears to be nothing more than common oil coloured with verdigris. The herb was formerly employed in fomentations, but is now thought unworthy of notice.

JUNIPER. Many virtues have been attributed to the *berries* of this shrub; but without any foundation, except as to its *diuretic* and carminative qualities, which it certainly possesses to a considerable degree. Juniper berries generally form a part of

diuretic balls and drenches; they are recommended also in flatulency of the stomach and bowels.

The dose is from one ounce to two ounces.

Juniper berries are often injured by keeping; becoming dry, shrivelled, or nearly rotten. The purchaser should choose such as are plump, rather heavy, and moist internally.

An oil is obtained from juniper by distillation, which seems to be the part on which the virtues of the berry depend. Oil of juniper is an excellent carminative and diuretic: the dose is from one dram to two. It is generally highly adulterated with oil of turpentine; but this admixture does not injure it materially; oil of turpentine being very similar to it in its medical qualities, though not so powerful.

KALI. This is the new name which the London College of physicians has given to pure vegetable alkali, or potash. (See Potash.)

KERMES MINERAL. A red powder prepared from antimony, nearly the same as the golden sulphur of antimony, and re-

commended as an alterative, in doses from one to two drams. (See Antimony, and Golden Sulphur of Antimony.)

KINO. A resinous substance, possessing a strong astringent quality: a good remedy in diarrhœas which depend on relaxation of the intestines.

The dose is from two to four drams.

LAC. A resin of a dark colour, deposited by an insect of the East Indies on the small branches of trees. It is now employed only in the composition of sealing-wax and varnishes.

LADANUM. A resinous substance brought from Candia. It has been recommended as a pectoral medicine; but probably does not possess any quality of that kind, as it is now used only as an ingredient in a warm stimulating plaster, which is of no use in veterinary practice.

LAUDANUM. A popular term for tincture of opium. (See Opium.)

LAVENDER. A plant whose distilled water and fragrant oil are employed in medicine, but not in the veterinary practice.

LAUREL, or *Bay*. The leaves of bay are used only in *fomentations*. (See Pharm.)

LEAD. Many useful preparations are made from this metal; among which are litharge, Goulard's extract, sugar of lead, and the following:—

LEAD, RED, or *Minium*. This is a red powder, made by keeping lead in a high degree of heat: it is used in the composition of plasters.

LEAD, WHITE, is commonly made by exposing thin sheets of lead to the vapour of vinegar, by which it is converted into a white powder. White lead is often employed in the composition of healing and softening ointment, for horses that are subject to cracked heels.

LEOPARD'S BANE. This plant has been recommended as a febrifuge, but is never employed in veterinary medicine.

LIME is sometimes used as a caustic in that disease of the horse's foot termed canker; it is preferred for this purpose, on account of its absorbing the moisture which forms upon the diseased parts, and which is thought to be inimical to the cure. Lime-water is recommended in the disease termed diabetes, which consists in a profuse discharge of limpid urine, causing weakness, emaciation, and hectic fever.

I have seen it used, however, in two cases without success.—Lime-water is made by mixing lime with a large proportion of boiling water, stirring the mixture for some time, and afterwards pouring off the transparent liquor, which is to be carefully excluded from the air. During the whole process, indeed, there should be as little exposure to air as possible.

LINIMENT. A term given to external applications of the oily kind, but of a consistence rather thicker than oil.

LINSEED. These seeds abound with oil and mucilage, and are well adapted to the composition of those emollient drinks that are so useful in inflammations of the bladder and bowels, or complaints of the urinary passages. A strong mucilaginous drink may be made without bruising the seeds, either by decoction or infusion. (See Emollients and Pectorals, Pharm.)

LIQUORICE. An extract made from liquorice root, and supposed to be of use in relieving cough. In the horse it is not applicable to this purpose, as its good effect depends upon its gradual solution in the mouth, so as to be constantly lubricating the

throat. Many writers, however, recommend liquorice in their pectoral and cordial drenches, probably with a view to render them more palatable.

LITHARGE. A calx of lead employed in making Goulard's extract and diachylon plaster.

LOGWOOD. An extract is made from logwood which possesses a considerable astringent power: it is often employed by medical practitioners in diarrhœa depending upon relaxation of the bowels; and though it has not yet been introduced into veterinary practice, it would probably be found an useful medicine in similar complaints of the horse, and deserves a trial in cases which have resisted the common remedies.

It may be given in doses from two to three drams. Alum, opium, and some aromatic, such as cassia, are often joined with the *extract*, and sometimes chalk.

MACE. A pleasant aromatic spice, too expensive for veterinary purposes: nor is there any complaint in which it is particularly required; as cassia, cardamoms, caraway and anise seed, are more effectual, and considerably cheaper.

MADDER. This root was formerly used in medicine as a remedy for jaundice. Farriers still employ it for the same complaint, (which they term the *yellows,*) both in horses and horned cattle. In the former, the disease most commonly arises from increased action or inflammation of the *liver*. Little reliance is to be placed on madder.

The dose is about one ounce. (See Compendium.)

MAGNESIA. A white powder, so extremely light that a sufficient dose could not be given to a horse without great inconvenience. It is a very useful *absorbent* in the human body, and well calculated to remove *heart-burn*, by destroying any acidity that may exist in the stomach; it has also the advantage of acting as a gentle laxative. But in the horse, chalk, or either of the fixed alkalies, answers the purpose equally well; and if a laxative effect is required, a small dose of aloes may be added. (See Absorbents, Pharm.) (See Alkali, Mat. Med.)

MAIDEN HAIR. An old remedy for coughs, but not proper for veterinary practice.

MALACCA BEAN. The acrid matter which renders this bean useful is contained

between two membranes which cover the kernel. The Malays employ it for destroying fungous or proud flesh; and, from its corrosive quality, it would probably be found very serviceable as an external application in horses.

MALLOWS. This plant is useful in the composition of emollient drinks, from the mucilage it contains: fomentations, glysters, and poultices, may also be made with it. (See Pharm.)

MALT is very serviceable to horses that are recovering from fever: it is useful, also, when the system is weakened by large abscesses which discharge copiously, and in almost every case depending on debility.

It appears to be easy of digestion, and very nutritious, though not so stimulating as oats. Green malt has been recommended for improving the condition of horses, and giving them a smooth glossy coat. Infusion of malt is sometimes given with advantage to sick horses; but they generally require to be drenched with it, which is a great inconvenience. It is always adviseable to employ malt that is broken, as it is more readily digested, and requires less mastica

tion in that state; and if a horse can be induced to eat in the form of a *mash*, it is still better. (See Mashes.)

MANNA, a gentle laxative; but never used in the diseases of horses.

MARJORAM. An agreeable aromatic herb, whose essential oil possesses nearly the same properties as the oil of origanum; a remedy much used by farriers in strains, bruises, &c. but always mixed with other oils or spirits, such as oil of elder, camphorated spirit, &c.

MARSH MALLOW. This plant contains rather more mucilage than common mallows, and is therefore better calculated for making mucilaginous or emollient drinks, glysters, or fomentations.

The *root* is the best part, which, if carefully dried, may be kept a long time. These mucilaginous drinks are very useful when the bowels or bladder are inflamed or irritated by too strong physic, or when there is any pain or obstruction in the urinary passages. They should be given frequently in the course of the day, and may occasionally be made the vehicle of more active medicines. Any thing which contains mucilage

in sufficient quantity may be employed for the purpose of making emollient drinks. (See Emollient, Pharm.)

MARUM, or *Syrian Herb Mastich.*—This plant, when dry, is extremely stimulating, and excites violent sneezing when applied to the membrane of the nostrils; for which purpose it is employed by medical practitioners: it is inapplicable to any purpose in the veterinary practice.

MASHES. A kind of medicated diet, and generally composed either of bran or malt. Bran mashes are made by pouring boiling water on fresh sweet bran, in a pail, so that the mixture, when stirred, may be about the consistence of a soft poultice; it is then to be covered over, and not given to the horse until sufficiently cold. When it is thought necessary to steam the head, as it is termed,—that is, for the horse to inhale the vapour as it arises,—the mash is put into the manger while hot; and some even put it into a nose-bag and secure it to the head, which is a bad practice, as it impedes respiration. *Steaming the head* is recommended in strangles, colds, and sore-throats.

BRAN MASHES form a very proper diet in

fever, and all inflammatory complaints; they are useful, also, as a preparative to *physic*, serving to remove any indurated fæces there may be in the bowels, whereby the operation of the medicine is rendered more safe and effectual. *Mashes* are a necessary diet also while the *physic* is operating. In making *malt mashes*, the water should be considerably below the boiling point; otherwise the malt would clot, and be spoiled. These are given for the purpose of recruiting strength, when a horse is debilitated from fever or any other cause. (See Malt.)

MASTICH. A resin, used only in the composition of varnishes.

MEADOW SAFFRON. The root of this plant is a powerful diuretic in the human system, but its effect on the horse is not known.

MECHOACAN. The *root* was employed as a purgative before *jalap* was known. It is much weaker than jalap; nor does it possess a single quality which can recommend it as a horse medicine.

MELILOT. This plant was sometimes employed in the composition of *glysters*,

and a plaister, but is now seldom applied to any medical purpose.

MERCURIALS. Preparations of quicksilver.

MERCURIAL OINTMENT. This is made by rubbing together, in a mortar, quicksilver and hog's lard, in various proportions, according to the strength required, until the former disappears, and the mixture assumes a dark blue or lead colour.

In the strongest *mercurial ointment* of the shops, there are equal parts of quicksilver and lard: these are the best proportions in which it can be made, as it is easily made weaker afterwards, by the addition of lard. In medical practice this ointment is employed chiefly for the purpose of introducing the quicksilver into the system, which is done by rubbing it for some time on the skin: this is said to be the most safe and effectual method of curing the venereal disease; but in the horse, considerable difficulty and inconvenience attend this operation, though it may be made to affect the system. Thus, if we wish to introduce mercury into the circulation, it is better to give

some preparation internally. (See Quicksilver.)

Mercurial Ointment, however, is often employed in veterinary practice, as an application to callous swellings, or enlarged joints: it is often mixed with camphor in those cases; and is certainly much more efficacious when converted into a blister by the addition of cantharides, or Spanish flies. In this state it is a good remedy for bog spavin, or other swellings of the hock joint.

Mercurial Ointment is said to be an effectual remedy for the *scab* in sheep, and is often an ingredient in ointments for the *mange*. In making *mercurial ointment* the operation is considerably expedited by using a small quantity of old suet, or tallow that is rancid.

Persons unacquainted with pharmacy commonly prefer *mercurial ointment* that has been recently prepared. It is said, however, that old and rather rancid ointment is more powerful, particularly if rubbed for a short time in a mortar before used.

MERCURY. *Quicksilver* is commonly distinguished by this name; the various preparations of which will be described in their

proper places. (See Calomel, Sublimate, Cinnabar, Æthiops Mineral, Turpeth Mineral, Red and White Precipitate, Calx of Quicksilver, Mercurial Ointment, and Quicksilver.)

MEZEREON. A root much used in medicine, in venereal and rheumatic complaints, but not calculated for veterinary purposes.

MILLIPEDES, or *Hog's Lice.* These were formerly employed by medical practitioners as a diuretic; but now quite disregarded.

MINDERUS'S SPIRIT. A neutral mixture, formed by the combination of *ammonia* with *acetous acid,* or distilled vinegar. It is much used by medical practitioners as a *diaphoretic;* and, though rarely used by veterinarians, I think I have seen it do good in febrile complaints, by relaxing the skin: in one case it occasioned sensible perspiration.

The dose is from eight to ten ounces.

MINERAL WATERS are too weak for veterinary purposes. It has been remarked by experienced persons, that waters impregnated with saline bodies, which are com-

monly said to be *brackish*, are generally injurious to horses; and I have observed that horses seldom do well on the coast, where the greater part of the water is in this state. This may arise from their not drinking a sufficient quantity for the purposes of digestion, on account of its disagreeable taste; for they often receive much benefit when at grass in such situations.

MINT. This is a valuable herb, and grows very abundantly. There are two kinds used in medicine; viz. *Spearmint* and *Peppermint*. The former is an excellent carminative, and generally affords relief in flatulency of the stomach and bowels, and that complaint which arises from it, termed gripes, fret, or flatulent colic.

Peppermint, however, is considerably stronger, and I think more certain in its effect. All the virtues of mint reside in an oil, which it affords plentifully by distillation; and this is the only convenient form in which it can be employed for veterinary purposes: but it requires to be highly diluted with water, with which it mixes very readily, if previously dissolved in a small proportion

of rectified spirit, or rubbed in a mortar with mucilage and sugar.

The dose of oil of peppermint is from twenty drops to half a dram: of spearmint from forty drops to one dram.

This is generally found a sufficient quantity, but may be increased if it prove ineffectual.

It is necessary to distinguish carefully between those pains of the stomach and bowels which arise from inflammation, and such as are caused by spasm, or flatulency. In the former, *mint* is very pernicious; in the latter, an excellent remedy. (See the Compendium of the Vet. Art.)

MITHRIDATE. The name of an elaborate and absurd preparation, of which *opium* was the principal ingredient. The London College have substituted for it a much neater and more efficacious formula, which they term *Opiate confection.*

MOSAIC GOLD. A combination of tin and sulphur, of a metallic appearance, though soft, and of a golden colour: it is not used in medicine.

MOXA. A light fibrous substance, some-

what like very fine tow. In eastern countries it is employed to remove deep-seated pains, being set on fire on the affected part so as to burn and produce an eschar: it is therefore nothing more than the actual cautery, which is much more conveniently applied in veterinary practice by means of the hot iron. (See Firing.)

MURIATES. Combinations of muriatic acid, with alkalies, earths, or metals. *Muriatic Acid* (See Acid Muriatic). *Muriate of Antimony* (See Butter of Antimony). *Muriate of Quicksilver* (See Sublimate). *Muriate of Soda* (See Salt).

MUSK. An animal substance, remarkable for its powerful odour: in medicine it is employed as an antispasmodic; but its extravagant price has prevented veterinarians from giving it a trial.

MUSTARD. Though chiefly employed for culinary purposes, it deserves to rank rather high in our Materia Medica, particularly as an external application. When flour of mustard is made into a thin paste with water, and carefully rubbed on the skin for some time, it excites considerable inflammation and swelling. This property renders it

extremely useful in cases of *internal* inflammation, particularly when the bowels or lungs are affected. This paste is rendered stronger by the addition of oil of turpentine. (See Embrocations, Pharm.)

MUSTARD may be given internally with good effect, in cases which require strong stimulants.

MYRRH. A gummy resinous substance, of a pleasant smell, and a bitter pungent taste: it is much used in medical practice, as a tonic and stimulant; and I think I have seen a good effect from it in horses; in weakness of stomach, diminished appetite, and imperfect digestion; in such cases I have given it with about two drams of aloes and a little soap; a little ginger also has been occasionally added: it is often joined with preparations of steel or iron.

There is a *simple* and a *compound* tincture of myrrh, sold by druggists: the former is not used in veterinary practice, but the latter is a favourite remedy with grooms and farriers, for recent wounds.

The dose of myrrh, is from 2 to 4 drams.

NARCOTICS. Medicines that stupify and procure sleep; such as opium, &c.

NATRON. (See Soda.)

NIGHTSHADE. (See Deadly Nightshade.)

NITRE, *Saltpetre* or *Nitrated Kali*, or *Potash*. A neutral salt, formed by the combination of nitrous acid and potash or kali. This is a medicine of great utility in veterinary practice, and highly esteemed both by farriers and veterinarians. It possesses a cooling and diuretic property, which renders it extremely useful in fevers, and all inflammatory complaints: joined with camphor, it is an excellent remedy for suppression of urine or stranguary, provided it does not arise from inflammation of the kidneys. (See Compendium.)

In fevers, it is often joined with emetic tartar, or antimonial powder, with good effect. In catarrh or cold, nitre is the best remedy; and in troublesome coughs it often gives relief, if mixed with some emollient drink and a little honey. (See Emollients, Pharm.)

The medium dose of nitre is about one ounce, though farriers often give double that quantity, or more; but in such large doses it is apt to irritate the stomach and do

mischief; therefore in urgent cases one ounce may be given every fourth hour, in which way there will be no danger of its producing that effect, particularly if it be given in a mucilaginous drink, or in water-gruel. If nitre be given in the form of a ball, it is advisable to offer some water immediately before or after, or to wash it down with a horn-full of water-gruel.

Nitre, as we have already observed, acts as a diuretic: but this effect is remarkably expedited by the addition of camphor, about two drams of the latter to one ounce of nitre.

NITROUS ACID. A strong liquid caustic, which when diluted with a large proportion of water forms a good detergent wash. (See Detergents, Pharm.)

Quicksilver is readily dissolved in this acid, and forms with it an excellent caustic, which is an infallible remedy for the *foot-rot* in sheep. This solution may be mixed with melted lard, so as to form a strong detergent ointment, or with water in any proportion. (See Acid, Nitrous.)

NUTMEG. This well-known spice is a good stimulant and cordial medicine, but not

preferable to many others that are much less expensive. (See Cordials, Pharm.)

OAK BARK. A decoction of oak bark is a good vehicle for tonic and astringent medicines. When finely powdered and made into balls with ginger and a little oil of caraway, it may be of service in those complaints, the continuance of which depend upon debility. It is said, however, to be much less efficacious than *Peruvian bark;* yet, when that cannot be procured, it may be found an useful substitute. The dose is about two ounces.

OILS. Oils are either *fixed* or *volatile.* The former are procured from various animal and vegetable substances, generally by means of pressure, from which circumstance they have been named also *Expressed oils;* and are termed fixed, because they do not evaporate, except at a very high temperature, when they are decomposed. *Volatile oils,* on the contrary, evaporate very readily, and are generally obtained from vegetables by distillation; and as they commonly contain all the essential qualities of the substance they are procured from, they have been named also *Essential oils.*

The numerous officinal oils, directed in the old dispensatories, are still highly esteemed by farriers; among which are, oil of swallows, earthworms, Johnswort, spike, petre, &c.; and we frequently meet with receipts for "strain or bruise oils," in which more than a dozen different oils are ordered! Perhaps it may be an acceptable piece of information to those who place any confidence in these oils, that only three kinds are kept in the shops, from which this great variety is furnished; which are, oil of elder, oil of turpentine, and Barbadoes tar. Oil of spike is made by colouring oil of turpentine with alkanet root; oil of petre, by dissolving Barbadoes tar in the same oil: for all the other kinds, oil of elder is sold; and this is often made by colouring common oil with verdigris.

Oil of Elder. (See Elder.)

Oil of Bay. This is more like ointment than an oil, of a light green colour, and smells like bay berries, from which it is procured. It is used chiefly as an external application in cutaneous complaints, such as the mange. Oil of bay is sometimes substituted for hog's lard in making mercurial

ointment, and is supposed to render it more active. When to this mixture is added cantharides and oil of origanum, a strong blister is formed, which is warmly recommended for the removal of splents and spavins. (See Blisters, Pharm.)

OIL OF CASTOR. An useful laxative. The dose is about a pint. (See Castor Oil.)

OIL OF ALMONDS. A very sweet and pure oil, obtained either from sweet or bitter almonds, by expression.

It is used in coughs, and as a laxative for children, in medical practice; but is never required for veterinary purposes, olive oil being equally efficacious, and similar in its medical properties.

OIL OF OLIVE. This also is a very pure and sweet oil; and in the dose of a pint generally operates as a laxative. When castor oil cannot be easily procured, this may with great propriety be substituted for it.

OIL OF LINSEED. This also has a laxative quality, but is not so certain in its effect as the castor or olive oil. It is employed as a remedy for coughs; and on such occasions the *cold-drawn oil* is preferred, *i. e.*

that which is expressed from the seed without the assistance of heat. Farriers, ever averse to the use of simple medicines, invented the following absurd receipt for an epidemic cough, which prevailed a few years ago: "Cold-drawn linseed oil four ounces, Barbadoes tar four ounces, balsam of sulphur four ounces, honey four ounces, liquorice powder six ounces, elecampane powder three ounces." When we reflect that all the medicines used by farriers consist, like the above, of a great number of heterogeneous substances, it will not appear astonishing that the veterinary art made so little progress while in their hands.

OIL OF PALM, or *Palm Oil*. This, though termed an oil, is of the consistence of hog's lard, and very similar to it in its medical qualities. It is of a yellow colour, and has rather an agreeable smell.

OLIBANUM. A gummy resinous substance, sometimes used in medicine as a stimulating expectorant, but scarcely known in veterinary practice.

ONIONS. These possess a diuretic power in the horse, but are seldom used. In suppression of urine, a peeled onion is some-

times placed within the sheath, or prepuce of a horse, or vagina of a mare, with a view to excite *staling*. It is said to succeed now and then; but in difficult cases it is certainly an inadequate remedy, and when the bladder is inflamed may do much injury.

OPIATE CONFECTION is composed of opium, long pepper, and other stimulants. One ounce of the confection does not contain more than fourteen or fifteen grains of opium; it may therefore be given in doses from one to two ounces, though in this quantity it would be a powerful stimulant.

OPIUM. One of the most important articles of the Materia Medica.

It is classed among the narcotic sedatives, of which it is undoubtedly the most useful.

The anodyne quality which renders *opium* so valuable in human medicine, is not so manifest when given to the horse: this I attribute to the great difference there is between the diseases of men and horses.

If injudiciously given, *opium* frequently aggravates the disease, and does much injury: and I have several times seen it increase pain, when it has been improperly given as an anodyne. In spasmodic com-

plaints of the bowels it is an excellent remedy, particularly if joined with aromatic powder, ginger, or some other stimulant. In diarrhœa it is an effectual remedy, but must be given cautiously. In diabetes I have found it very beneficial, when joined with bark and ginger. Sometimes it is given with emetic tartar, and some cordial composition, with good effect, and in this way it proves a good diaphoretic.

I have often given opium and squill, in obstinate coughs, with success; but the effect is not always permanent.

Opium is very apt to produce costiveness in horses; but this tendency may be in a great measure counteracted by exercise: when it does take place, it may be removed by glysters, bran mashes, or a laxative ball.

The medium dose of *opium* is one dram; but if given in the form of glysters, which it sometimes is with the best effect, two drams will not be too much.

In human medicine *opium* is frequently used in the form of a tincture; in veterinary practice it is most convenient in a solid form. Should a liquid form be at any time necessary, a watery solution (using the sedi-

ment as well as the clear part) is preferable to the tincture.

OPODELDOC is made by dissolving soap and camphor in spirit of rosemary. It is either liquid or solid, according to the proportion of soap. In the solid state it seems to be the same as the celebrated *Steers's Opodeldoc.* (See Pharm. article Embrocations.)

It is a proper remedy for strains and bruises, and is a very proper application when the inflammation, which always accompanies those complaints at first, has subsided. (See the Compendium.)

OPOPONAX. A gum resin, nearly resembling *galbanum* in its medical qualities, though so much inferior that it does not merit any notice as a veterinary medicine.

ORIGANUM. The essential oil of this plant is much used by farriers, as an ingredient in their strain oils, or mixtures for bruises. It is a very powerful stimulant, and capable of doing much good in those complaints: it is sometimes mixed with mercurial ointment, oil of bay, and cantharides, to form strong *blisters.* (See Pharm.)

ORPIMENT. (See Arsenic, Yellow.)

OYSTER-SHELL, when burnt and levigated, is employed as an *absorbent.*

The dose is about one ounce.

OXIGEN. A constituent part of atmospheric air, without which it would be unfit for respiration. In breathing, we deprive the air of this pure and vital principle: it is therefore unfit for the purpose a second time: and if an animal be confined in air that has been once respired, life is almost instantly extinguished. Hence may be inferred the necessity of ventilating stables: for although in close stables the air is not wholly deprived of this principle, yet its proportion is considerably diminished: and it is well known, that when there is a deficiency of this animating principle, the system is debilitated, and all its functions imperfectly performed; whence arise cough, broken-wind, diseased eyes, &c. &c. Perhaps future observation may enable us to add glanders to the list of diseases caused by foul air.

OXYD. The calxes of metals are now termed *oxyds*, on account of their containing a certain proportion of oxigen (the acidifying principle); but not sufficient to give

them the properties of an acid—the term *oxyd*, signifying an imperfect acid. But this subject more properly belongs to a chemical work.

PALM OIL. (See Oil of Palm.)

PECTORALS. Medicines that relieve cough, and disorders of the lungs. (See Pharm.)

PELLITORY OF SPAIN, the root. This is used chiefly to relieve the tooth-ache, and pain about the jaws; which it does by causing a copious discharge of saliva, when kept in the mouth a short time. It is not necessary in veterinary practice.

PENNYROYAL. The essential oil of this herb possesses a carminative power, but is very inferior to that of *peppermint*.

PEPPER, BLACK. This is often used by farriers in the colic, but is by no means an eligible remedy, and is often given very improperly. I once saw a farrier give two ounces, in half a pint of Daffy's Elixir, to a mail-horse, that was said to be attacked with gripes; and he condescended to give me the following *scientific* explanation of the manner in which it was to act. "*The pepper is to break the wind, and the Daffy's*

Elixir is to drive it out." I remonstrated, and endeavoured to rescue the poor animal, who suffered from *inflammation* of the bowels, but to no purpose; the poisonous drench was given, and in the evening the horse died. I mention this circumstance as a caution to those who are too fond of giving those very hot remedies in pains of the bowels, without inquiring into the nature of the complaint. There are cases, no doubt, in which *pepper* may be given with advantage, particularly in flatulent complaints: but these must be carefully distinguished from such as are inflammatory; for in these, *pepper* is absolutely poisonous. (See the Compendium, in which are plain directions for distinguishing between flatulent and inflammatory colic.)

The dose of *black pepper* is from half an ounce to an ounce.

PEPPER, CAYENNE. (See Cayenne Pepper.)

PEPPER, LONG, is rather stronger than black pepper.

PEPPER, JAMAICA. (See Jamaica Pepper, or Allspice.)

PEPPERMINT. (See Mint.)

PHOSPHORUS. A very combustible substance, made either from bones or urine. Experiments have been made at the Veterinary College to ascertain its medical qualities: it proved to be a very dangerous medicine, inflaming the stomach in small doses.

PINK ROOT. (See Indian Pink.)

PITCH. A black and impure resinous substance, used by farriers in making *charges*. (See Burgundy Pitch.)

POMEGRANATE. The dried fruit is a moderately strong astringent; and is sometimes employed in diarrhœa, particularly in horned cattle.

The dose is from half an ounce to an ounce.

It may be joined with alum, ginger, and other auxiliaries, and occasionally with opium.

POPPY. The heads of *poppy* dried make a good fomentation for wounds and tumours that are in a painful or irritable state: for which purpose they are to be broken in pieces, and boiled in water, so as to make a strong *decoction*. This decoction proves very serviceable in irritability of the bladder, if used as a glyster, the bowels having been previously emptied: for this purpose

the decoction should be made stronger, by boiling it for some time.

It seems very probable that the good effect of this decoction depends in a great measure upon the opium which is extracted from the poppy heads: it may be better, therefore, to dissolve in water-gruel *a proper dose* of opium, when an anodyne glyster is required, as we cannot be accurate in respect to quantity when the decoction of *Poppies* is employed.

POTASH, *Carbonate of, Prepared Kali*, or the *Vegetable Alkali*. The potash of commerce is in a very impure state, and not applicable to chemical or medical purposes. When properly purified, it is joined with *purgatives* and *tonics* with advantage. In those cases which require the use of *tonics*, there is generally an acidity in the stomach, which potash corrects; and it renders purgative medicines more easy of solution. Given alone it generally acts as a diuretic. When neutralized with acids, it has a laxative property, but requires to be given in large doses. With vitriolic acid it forms vitriolated tartar, or sal polychrest (*vitriolated kali*); with nitrous acid, that very use-

ful medicine termed nitre (*nitrated kali*), which, contrary to what we have just observed, is a diuretic in a moderate dose (See *Nitre*); and with vinegar, or acetous acid, it makes soluble tartar (*tartarized kali*). The purified potash is named in the shops *prepared kali*; but formerly salt of tartar, or wormwood. When potash is deprived of the carbonic acid with which it is naturally combined, it becomes a strong caustic; and when diluted is sometimes employed as a wash for the mange. In this state it is termed *pure kali*, and is seldom used internally. (See Alkalies.)

PRECIPITATE, RED, or *Red Nitrated Quicksilver*. This is extremely useful as a mild caustic or detergent, and has an excellent effect in foul ulcers. It may be used either alone, being finely powdered and sprinkled on the affected part, or mixed with various ointments. (See Detergents.) It is made from quicksilver and nitrous acid, but is considerably weaker than a solution of that metal in nitrous acid. It becomes, however, a strong and very efficacious caustic, when dissolved in nitrous acid; in which state, by proper management, it cures fistu-

la, poll-evil, and canker. This solution may also be mixed with unctuous substances, forming with them good detergent ointments; or it may be diluted with water so as to form a detergent lotion of considerable efficacy.

PREPARED KALI. (See Potash.)

PUFFBALL. The dust of puffball is sometimes used to stop bleeding; but nothing of this sort should be depended upon when the bleeding is considerable, *pressure* being much more effectual.

QUASSIA. A powerful bitter, and a good medicine in cases of weakness of the stomach. It is generally given in powder, in doses from two to three drams, joined with ginger, or some other stimulant, and a small quantity of soda or potash.

QUICKLIME. (See Lime.)

QUICKSILVER, or *Mercury*. The most useful of all the metals for medical purposes. In its metallic state it is inert, but when combined with *oxygen*, or any of the acids, it becomes extremely active; and though one of the most valuable articles of the Materia Medica, requires considerable skill and experience to be employed with advantage.

The most simple preparations of quicksilver are, mercurial ointment, Æthiop's mineral, and cinnabar. These may be employed with little danger: they seem, indeed, to be of very little use as horse medicines, except the ointment, which is a good external application; and in human medicine a very valuable preparation. The more active mercurials are, sublimate (muriated quicksilver), red precipitate (red nitrated quicksilver), turpeth mineral (vitriolated quicksilver), and calomel, each of which is described in its proper place.

QUICKSILVER OXYDATED, or *Calcined Mercury.* A reddish powder, into which quicksilver is converted by being kept in a certain degree of heat a sufficient length of time, and in a vessel adapted to the purpose. It is an active mercurial, but rarely employed in veterinary practice.

The dose is from half a dram to one dram.

RAKING. A term employed by farriers for an operation which consists in introducing the hand into the horse's *rectum*, and drawing out any hard excrement that may lodge there. This may generally be effected

more to the purpose, and with greater ease to the animal, by means of glysters.

RATTLESNAKE ROOT. This is now neglected by medical practitioners, and inapplicable to veterinary purposes.

REALGAR. A natural combination of sulphur and arsenic, not used as a medicine. (See Arsenic.)

RECTIFIED SPIRIT. *Alkohol*, or *Spirit of Wine.* This is obtained in a dilute state from fermented liquors by distillation, and is afterwards rectified or concentrated, by repeating the operation two or three times. Rectified spirit is the basis of many useful embrocations, for strains, bruises, &c. It dissolves camphor and all the resins very readily: Hence we have camphorated spirit, opodeldoc, Fryar's balsam, &c. Mixed with an equal quantity of water it forms what is termed proof spirit, which is the liquid generally employed for making tinctures. *Rectified Spirit* is often used alone as an embrocation for strains; and, when the injury is deeply seated, is very serviceable. I think, however, it is rendered more efficacious by the addition of camphor, or oil of rosemary.

Rectified spirit is never employed as an internal remedy in the horse; though fermented liquors, such as beer, porter, or wine, have been often given with great advantage, in cases which required cordials. I have often seen horses, that have been so fatigued with a long chase or journey as to refuse their food and appear quite exhausted, wonderfully refreshed by taking a cordial ball in a pint or more of beer, and feed soon after with great alacrity. The advantage thus derived is not merely temporary, as they are by this treatment rendered adequate to another chase or journey much quicker than they would otherwise be. (See Cordials, Pharm.) I have known wine given in obstinate diarrhœa with good effect.

It may be asked, why diluted alkohol, or rectified spirit, is not equally useful, since it is the essential principle of all fermented liquors. The reason is this: When rectified spirit is diluted with water to any degree, the combination is so weak, that the heat of the stomach readily separates the former, which from its volatility attaches itself to all the superior parts of the stomach, acting on them as rectified spirit; whereas in ferment-

ed liquors, the spirit and water are so firmly united, that the heat of the stomach is not sufficient to separate them. This may be proved by experiments out of the body, and sufficiently accounts for the difference we observe between the action of diluted spirit and fermented liquors in the human stomach; but in the horse great part of this organ is covered by an insensible membrane; and as spirit has never been fairly tried on this animal, it is worth while to make some experiments on the subject.

I once gave six ounces of brandy, diluted, with the best effect, to a horse that was once done-up in a journey; it enabled him to continue it, without any apparent inconvenience.

REGULUS OF ANTIMONY. Common or crude antimony, deprived of its sulphur, and brought to a metallic state. It is never used as a horse medicine. In the human body it is said to operate with great violence.

REPELLENTS. A term employed by the old school, for medicines that were supposed to have the power of causing tumours or eruptions to recede from the surface of

the body. The term is founded upon a false theory, and has been the cause of much mischief in practice.

To be convinced of this, the reader may consult modern works on physiology.

RESINS are distinguished by their inflammability, and by combining readily with rectified spirit and oils. They are generally solid, and immixable with water.

RESOLVENTS. Medicines that disperse tumours, either external or internal.

ROBORANTS. Medicines that strengthen the system.

ROSEMARY. The essential oil of rosemary forms an excellent embrocation for strains and bruises, if mixed with rectified spirit and soap. This mixture is nearly the same as the celebrated *opodeldoc*; and by the addition of camphor becomes the same thing. Oil of rosemary has been given in the flatulent colic or gripes with good effect, but requires considerable dilution.

The dose is from half a dram to one dram, or more.

ROSIN, yellow and black. The former is a weak diuretic, and sometimes given with advantage to horses that are subject to swell-

ing of the legs. The dose is about one ounce, which may be powdered and mixed with the corn: it is necessary to continue this medicine for several days, or until its diuretic effect is considerable. Black rosin is not used in medicine.

ROWELLING. An operation often performed in veterinary practice. It consists in making an incision in the skin, about an inch in length, with a pair of short and strong bladed scissars. The finger is then introduced, in order to separate the skin from the subjacent parts all round the incision, that the cavity may contain a circular piece of leather about an inch and a half or two inches in breadth. Before this leather is introduced, a hole is made in the centre about half an inch in diameter: it is then covered with tow (the hole being left open), and smeared with digestive ointment: when the rowel is put in, the hole in the middle of the leather is plugged up with a little tow.

In this situation it is left until matter forms, which generally happens in two or three days: the plug of tow is then withdrawn, and the matter suffered to flow out, in which state it remains as long as is thought

necessary. Thus we see that a rowel is an artificial abscess, the leather first causing *inflammation*, which ends in *suppuration* or the formation of matter; and the matter continues to be formed as long as the extraneous body of leather remains under the skin.

The intention of rowelling is to divert inflammation from any important organ or part of the body. Thus, when the lungs are inflamed, the animal certainly dies, unless it is put a stop to; but the skin may be inflamed to a considerable extent without danger: we therefore put a *rowel* in the chest, which, though not sufficient of itself to stop the inflammation of the lungs, contributes very materially to it, and with the other necessary remedies often effects a cure. In large swellings of the hind legs, and obstinate cases of grease, *rowels* in the thighs are good remedies.

In shoulder strains, a *rowel* may be put in the chest with good effect. In short, whenever inflammation attacks an essential and important part of the system, much benefit will be derived from inserting a *rowel* in

some contiguous part that is of little importance. When a *rowel* is removed, the part generally heals of itself; if not, a little Fryar's balsam may be applied.

RUE. This plant has been recommended as an anthelmintic: but whatever its virtues may be in the human body, it has certainly no effect of this kind on the horse; and may with great propriety be dismissed from our Materia Medica. Farriers sometimes use it in making fomentations.

SACCHARUM SATURNI. (See Sugar of Lead.)

SAFFRON was formerly thought a good cordial medicine, and frequently employed as such; but at this time medical practitioners are agreed in thinking it destitute of any medical virtues. It is still retained, however, in their Pharmacopœia, probably on account of its elegant yellow colour and fragrant smell. As a horse medicine it is certainly not worth notice.

SAGAPENUM. A gum resin, similar to but weaker than assafœtida.

SAGE. A plant not used in veterinary practice.

SAGO. A farinaceous substance, which, when boiled in water, is a proper drink for sick horses that are incapable of feeding.

ST. JOHN'S WORT. A plant not used in medicine, though formerly supposed to possess many virtues. The oil of St. John's wort sold by druggists, is nothing more than the common green oil, which is sold under a variety of names. (See Oils.)

SAL AMMONIAC, or *Muriate of Ammonia.* A neutral salt, which when dissolved in vinegar and water forms a good embrocation for strains and bruises.

SAL INDUS. A saline substance of a reddish colour and very unpleasant smell, lately brought from the East Indies, and strongly recommended as a remedy for that species of worm called *botts:* I have not found it however capable of destroying those worms or expelling them; though, if given in large doses, it will sometimes discharge common worms, particularly if assisted by aloes. The dose is from two to four ounces. It appears to differ from common salt only in being combined with a small proportion of liver of sulphur, or sulphuret of potash.

SAL VOLATILE. This term is promis-

cuously applied to compound spirit of ammonia, and prepared ammonia or smelling-salts; but the former is often distinguished by the name "*spirit of sal volatile.*"

SALTS. There are three kinds of salt, viz. the acid, the alkaline, and that which is formed by the combination of these, *i. e.* the neutral. (See Acids, Alkalies, and Neutrals.)

SALT, COMMON, or *Sea Salt.* This is the most useful of all neutral salts for veterinary purposes, nitre excepted.

In doses from four to six ounces it generally operates as an easy and effectual laxative; and when there are worms, if assisted by a small dose of aloes, it frequently expels them.

It is extremely useful in laxative glysters (See Pharm.) and considerably promotes the operation of castor oil. (See Laxatives, Pharm.) In chronic inflammation of the eye, I have often applied it to that organ in fine powder, with the best effect.

SALT PETRE. (See Nitre.)

SALT OF STEEL, or *Vitriolated Iron.* A combination of vitriolic acid and iron. This is by no means so remarkable for its *tonic*

power in the *horse*, as in the human subject; but it is said to possess this quality, and is often given in doses from four to six drams. I have several times employed it in cases that appeared to require tonic remedies, but with very little effect. (See Iron.)

SALT OF TARTAR. (See Potash and Alkalies.)

SALT OF WORMWOOD. (See the same.)

SARSAPARILLA. A root not used in veterinary medicine.

SASSAFRAS. The only part of sassafras that can be of use in veterinary practice is the essential oil, which is an aromatic stimulant of considerable power.

SAVIN. Farriers often employ the leaves of this shrub in a green state as an anthelmintic; but I have never seen it do any good.

SCAMMONY. A gum resin, strongly purgative, but never necessary in veterinary practice when aloes can be procured.*

SCORDIUM. The leaves of scordium were formerly considered as an astringent

* I have lately tried scammony in various doses: it produced scarcely any effect until six drams were given at one dose, which was followed by moderate purging.

and corroborant; and there is still an electuary of scordium or diascordium kept by druggists for the accommodation of farriers, who are often attached to useless medicines.

SEA-WATER. Some horses will drink a sufficient quantity of sea-water to excite purgation. Should such horses be affected with swollen heels, inflamed eyes, or other inflammatory complaints, it will be found an useful remedy.

SENNA. The leaves are an effectual purgative in the human body; but in the horse it is an inconvenient medicine, on account of the large quantity requisite to produce this effect. Some writers on farriery have recommended a strong infusion of senna, with Glauber's salt, as an expeditious laxative. I have given senna in considerable doses without the least effect. I tried also the following mixture, so strongly recommended by many writers on farriery, which did not affect the bowels in the slightest degree:—

Senna three ounces, infused in a quart of boiling water, and kept in a warm situation about an hour; the infusion was then strain-

ed off, and the remainder forced off by considerable pressure. In this infusion we dissolved four ounces of Glauber's salt, and gave the whole to a horse at one dose.

SIALOGOGUES. Medicines that cause an increased secretion of saliva;—the principal of which are the preparations of mercury.

SILVER. The only preparation this metal affords is the lunar caustic, or nitrated silver; an application of great importance in surgery, whether human or veterinary. (See Caustics, Pharm. and Mat. Med.)

SNAKE-ROOT. The idea that this root counteracts the bites of serpents is now disregarded; but it is considered an useful medicine in cases of weakness, and may be employed with advantage in veterinary practice, particularly in ill-conditioned wounds in which there appears a tendency to mortification.

The dose is from half an ounce to an ounce, and is generally given with prepared ammoniac, or salt of hartshorn, camphor, and bark; in some cases opium is added. (See Tonics and Antiseptics, Pharm.)

SOAP. The various kinds of soap have

all a strong diuretic quality; but the purer kinds only should be employed as internal remedies; and these are, Castile, Spanish, and pure white soap. Soap is an useful ingredient in purgative as well as diuretic preparations.

The dose is from two drams to half an ounce, but it is sometimes given in larger doses.

Soft soap is very useful in cleansing foul heels; and when mixed with oil of turpentine and spirit of wine forms a good embrocation for strains, bruises, and indurated tumours.

SODA. *Natron*, or the *Mineral Alkali*. This is procured chiefly from the ashes of marine plants. Its medical properties are nearly the same as potash, but the prepared natron or soda is sometimes preferred as an ingredient in purgative and tonic medicines.

The dose is from two to four drams.

SOUTHERNWOOD. A fragrant shrub, directed by the London College as an ingredient in fomentations.

SPANISH FLIES. (See Cantharides.)

SPEARMINT. (See Mint.)

SPERMACETI. An unctuous substance, procured from the head of a certain species of whale. In medical practice it is often employed as a demulcent to allay irritation, as in cough; but is rarely employed in veterinary practice, and appears to differ very little in its medical properties from hog's-lard or suet. It has been lately discovered that the muscular parts of all animals may be converted into a substance resembling spermaceti, by maceration in water.

SPIKE; a species of *Lavender*. An oil of spike is kept in the shops, and much used by farriers; it appears however to be nothing more than oil of turpentine coloured with alkanet root.

SPIRITS. (See Rectified Spirit.)

By the term Spirit is commonly understood *alkohol*, either pure or diluted, and mixed with various substances. Spirit may be obtained from fermented liquids in a diluted state; when concentrated and purified it is termed rectified spirit, or alkohol. An equal quantity of water being mixed with alkohol, forms proof spirit. There are various kinds of spirits used in medicine; such as spirit of nutmeg, spirit of juniper, &c.,

which are made by distilling the medical substance with dilute spirit.

SPONGE. Burnt sponge is sometimes used by medical practitioners in scrophulous complaints, but it is never employed in veterinary practice.

SQUILL, or *Sea Onion.* A large bulbous root resembling the onion, and a medicine of considerable value. The best preparation of squill for veterinary purposes is the powder of the dried root; which, in the dose of one dram or more, is an excellent expectorant, and very efficacious in chronic cough: in larger doses it generally acts as a diuretic, but is not a desirable medicine for that purpose, there being many diuretics more certain in their effect. *Gum ammoniacum* is an eligible addition to squill; and I have sometimes seen camphor and opium joined to it with good effect. One dram of the dried squill is equal to about five drams in its fresh state. There are three other preparations of squill made, viz. the spirituous and acetous tincture, and the oxymel; but these are not well calculated for veterinary purposes.

STARCH. Starch glysters with opium

are sometimes employed in obstinate diarrhœas or irritation of the rectum. In no other way is it useful in veterinary practice, while the cheaper mucilages, such as linseed, marshmallow, &c., can be procured; but when these are wanting, it is capable of making a good mucilaginous drink. (See Pharm. Emollients and Demulcents.)

STAVESACRE. The seeds of Staves-acre are recommended as a topical application in cutaneous complaints, and for destroying those animalcules which are sometimes generated upon the horse's skin. They are used either in the form of a decoction, or finely powdered and mixed with train-oil, turpentine, &c.

STEEL. The medical properties of steel are not supposed to differ from those of iron. (See Iron.)

STORAX. The common and the strained storax are the only kinds kept in the shops. The former is in the form of sawdust, intermixed with resinous matter of an agreeable odour: the latter is extracted from this dust, and is far more pure; indeed it is the only kind that can be employed for medical purposes. In its medical pro-

perties it nearly resembles balsam of tolu, and may be given in obstinate coughs with squill, opium, and soap.

The dose is about two drams.

STYPTICS are medicines which constringe the blood-vessels when wounded, so as to stop an effusion of blood. Many preparations have been recommended for this purpose: but when the size of the wounded vessel is at all considerable, an adequate degree of pressure by means of bolsters and bandages is alone to be depended upon; and when that cannot be done, the vessel must be tied up above the wound and below, by which the bleeding will be effectually suppressed. No danger is to be apprehended from slight bleedings in the horse, as they always cease spontaneously.

The styptics commonly employed are oil of turpentine, diluted vitriolic acid, muriate of iron, absorbent earths, and flour.

SUBLIMATE. *Corrosive Sublimate of Mercury*, or *Muriate of Quicksilver*. For veterinary purposes this is the most useful of the mercurial preparations, both for external and internal use. Though a violent remedy in the human body, and given only

in very minute doses (from the eighth to a quarter of a grain), it is comparatively innocent in the horse. I have often employed it to the extent of two drams at one dose, without producing much effect upon the animal: it is adviseable, however, to begin with a much smaller quantity, 10 grains for example, which may be gradually increased if necessary. I believe it to be the best remedy we know for the farcy, and more likely than any other medicine, *if properly managed*, to cure the glanders. I have often given it in obstinate cutaneous complaints, with emetic tartar, and generally with good effect. It commonly acts as a diuretic, and very seldom salivates, though given daily for two or three weeks. Sometimes it irritates the bowels and stomach, in which case opium becomes necessary.

When the use of sublimate is continued three or four weeks, it is necessary to watch its effect carefully, and to counteract its debilitating quality, by a nutritious diet, moderately warm clothing, and a stable properly ventilated.

The groom must be particularly attentive; frequently rubbing the legs, giving mode-

rate exercise, and warm water. When sublimate has been employed in large doses, and continued a considerable time, I have seen it produce a dangerous degree of debility, from which the horse was with great difficulty recovered; but this arose, in great measure, from the inattention of the groom. In short, sublimate is either an excellent remedy, or a dangerous poison, according to the judgment of the person who employs it. In the hands of those illiterate, conceited fellows, who think themselves profoundly skilled in medicine, and are more dangerous in a stable than an epidemic fever, it is liable to do great mischief, and should never be intrusted to them; but I repeat, when used by a judicious practitioner, it becomes in his hands an invaluable medicine. I have frequently and successfully employed it, generally beginning with a dose of 10 grains, which was gradually increased, according to the effect it appeared to produce. It should be finely powdered and mixed with a small quantity of cordial ball.

As an external application, it is also highly necessary: it may be dissolved in rectified spirit, proof spirit, or distilled water; but it

dissolves more readily if first rubbed in a mortar with a few drops of spirit of salt, or muriatic acid. It is an excellent application to foul ulcers, particularly those of the knees, when the ligaments are wounded. (See Detergents, Pharm.) It is capable also of destroying those animalcules which sometimes infest the skin of horses; and of curing the mange.

SULPHUR. (See Flowers of Sulphur.)

TANSY. This plant grows abundantly about the borders of fields; it has a strong bitter taste, and rather a pleasant odour. It may be employed in the form of a decoction as a vehicle for tonic or stomachic medicines. It has been said to possess an anthelmintic quality, but I believe there is no foundation for this opinion.

TAR. This is a good remedy for thrushes, and other diseases of the *frog*. It appears to promote the growth of horn, by gently stimulating the secretory vessels of that part.

The rotten parts of the frog having been carefully removed with a knife, and the rest well cleaned, the *tar* is to be melted and poured into the cleft or cavity: a pledget of tow is then to be laid on the part and con-

fined by some proper contrivance. In bad cases, a small proportion of vitriolic acid should be carefully mixed with the *tar*; and when a *thrush* has degenerated into the disease termed *canker*, a larger proportion of the acid should be employed. (See Liniments, Pharm.)

Tar mixed with oil of turpentine, and cantharides forms a strong blister. Farriers sometimes employ *tar* as a remedy for cough; but it more frequently aggravates than relieves the complaint. (See also Barbadoes Tar.)

TARTAR. An acid substance, found about the sides and bottoms of casks in which wine is fermented: when purified, it is termed crystals, or cream of tartar. Farriers generally employ it in their purging medicines, upon the authority of some old writers, who supposed it to have the property of correcting aloes; but in the horse it is a very inert medicine, and, in my opinion, of very little use.

TARTAR, EMETIC. (See Emetic Tartar.)

TARTARIZED ANTIMONY. (See Emetic Tartar.)

TARTAR, SOLUBLE, or *Tartarized Kali.* A neutral salt, not used in veterinary medicine.

TARTAR, VITRIOLATED. A neutral salt, not adapted to veterinary purposes.

TIN. This metal is a good anthelmintic in dogs; and though not employed in veterinary practice, appears to be worth a trial. I have seen great numbers of worms discharged from dogs, by giving filings or scrapings of pewter, which is composed principally of tin and lead.

TOBACCO. This is sometimes given to horses by grooms, for the purpose of keeping their legs fine; it generally acts as a diuretic.*

TORMENTIL. The root is a powerful astringent, and is sometimes employed in the diarrhœas of horses and horned cattle, with good effect.

One ounce, or one ounce and a half, being boiled in three pints of water to one pint and a half, with a little cassia and

* A short time since an infusion of about two ounces of tobacco in a quart of beer was given to a horse merely for the purpose of keeping his heels fine. He died immediately after taking it.

caraway seeds, makes one dose, which may be repeated if necessary.

TRAGACANTH, or *Gum Dragon.* This gum makes a strong mucilage, and may be employed in making emollient drinks.

TURBITH MINERAL, *Yellow Mercurial Emetic,* or *Vitriolated Quicksilver.* This mercurial preparation is seldom used in veterinary practice, being apt to irritate the stomach and bowels, and bring on violent purging; but it has been recommended as a remedy for farcy.

The dose is from half a dram to a dram.

It is a good emetic for dogs, when they have swallowed any poisonous substance, or at the commencement of *the distemper.*

TURMERICK. This root, though formerly employed, and still highly esteemed, by farriers, as a remedy for the jaundice, or yellows, does not appear to differ from other aromatic stimulants, which quality it possesses in a moderate degree.

The dose is about one ounce.

TURNIPS. Boiled *turnips* make an excellent poultice for the heels when affected with grease.

TURPENTINE. This term is applied to

the resinous juices of certain trees. There are four kinds, viz. Chio, Strasburgh, Venice, and common *turpentine*; the two last only are employed in veterinary medicine. They are effectual diuretics, and possess a considerable carminative power. Common *turpentine* is a principal ingredient in digestive and detergent ointments. By distillation we obtain from it the oil, or as it is sometimes termed, the spirit, of turpentine, a medicine of great utility. In doses from one ounce to two ounces, it frequently cures the flatulent colic, or gripes; and, when combined with camphor and other stimulants, makes a good embrocation for indurated swellings, strains, and bruises. When properly mixed with mustard, it forms an embrocation that has been found serviceable in counteracting *internal* inflammation. I have seen it applied to obstinate ulcers with good effect. It is an useful ingredient in blistering-ointment, and liniments.

Venice Turpentine is generally made by mixing the oil with the common *turpentine*, which is easily done when the latter is melted.

Venice Turpentine is sometimes employed

as an ingredient in cough medicines. The dose is about half an ounce. But if given as a remedy for flatulent colic, or as a diuretic, a larger quantity is necessary. It makes an excellent detergent ointment, if mixed with about a fourth or a third part of red precipitate, finely powdered.

TUTTY. A grey earthy substance, not used in veterinary practice.

VALERIAN. The dried root is employed by medical practitioners, in spasmodic and nervous complaints; but there is no disease in the horse in which it is likely to be serviceable.

VERDIGRIS. The rust of Copper. It is made in wine countries by burying thin copper-plates in the refuse parts of the grape, after the juice has been pressed out. is employed externally as a mild caustic or detergent, and is frequently mixed with common turpentine, or ointments, for the same purpose. (See Detergents, Pharm.)

When *verdigris* is dissolved in distilled vinegar, and crystallized, it becomes considerably stronger, and will be found an excellent remedy for *quittors*. (See the Compendium.) In this state it is called crystal-

lized or distilled *verdigris*. Common *verdigris* has been recommended as a remedy for the farcy; but I have never seen it do any good in that complaint, though I have several times given it a trial.

It has been fairly tried in the glanders: half an ounce was given daily for a considerable time, but it had no effect on the disease, nor did it occasion any inconvenience to the animal. This is rather remarkable, *verdigris* being considered as a poison in the human body, and is the substance which causes the deleterious effects which copper vessels, when employed for culinary purposes, have sometimes occasioned.

VERMILION. This is prepared nearly in the same way as *cinnabar*; but as a little arsenic is sometimes employed to heighten its colour, it is never used for medical purposes.

VESICATORIES. A term synonymous with blisters.

VINEGAR. Though medical practitioners prefer *distilled vinegar*; yet, for veterinary purposes, the best *undistilled vinegar* is just as proper. It makes an useful embrocation, with about a tenth part of *sal*

ammoniac or muriate of ammonia, for inflamed swellings; and when neutralized with prepared ammonia, or salt of hartshorn, forms a preparation sometimes employed in fevers, and termed Minderus's spirit.

Vinegar is sometimes used alone as an embrocation for strains, bruises, or inflamed swellings of any kind, and often with success: it may be made more effectual, however, by the addition of sal ammoniac and proof spirit, or by being mixed with a small quantity of sugar of lead and water, according to the circumstances of the case. A solution of honey in *vinegar* is termed an oxymel, and is sometimes used as a remedy for coughs: this is said to be nearly the same preparation as Godbold's vegetable syrup, which has been sometimes recommended by farriers, to cure "*broken wind*," an incurable disease!

VIPER'S FAT is similar in its medical qualities to common fat; though formerly supposed to be a remedy for the bite of the viper, and other venomous reptiles.

VITRIOL, a term commonly applied to those salts of which vitriolic acid is a constituent part: the London College, however,

gives names expressive of their composition; thus, *white vitriol*, which is composed of vitriolic acid and zinc, is named *vitriolated zinc.*

VITRIOLIC ACID. (See Acid Vitriolic.)

VITRIOLATED COPPER. (See Blue Vitriol.)

VITRIOLATED IRON, *Green Vitriol*, or *Copperas.* This resembles salt of steel in its medical qualities. (See Salt of Steel.)

VITRIOLATED KALI, or *Vitriolated Tartar:* not used in veterinary medicine.

VITRIOLATED NATRON, or *Soda.* (See Glauber's Salt.)

VITRIOLATED QUICKSILVER. (See Turbith Mineral.)

VITRIOLATED ZINC, *White Vitriol*, or *Copperas.* This has been recommended as a tonic remedy, in doses from half an ounce to six drams. But I have seen it given to the extent of twelve ounces at one dose, to a glandered horse, by way of experiment, without producing much inconvenience: the only effect produced was upon the urinary organs, occasioning a frequency and a little difficulty in *staling.* It is a good ap-

plication to indolent ulcers, and in the latter stages of grease. (See Astringents, and Tonics, Pharm.) A weak solution of white vitriol is often employed as an eye-water.

WAX. Bees-*wax* is used only in the composition of ointments and plasters.

WINE. *Port wine* has been strongly recommended in obstinate diarrhœas, accompanied with debility. A little cassia or ginger is generally added to it, and on some occasions *opium*. It is certainly a powerful cordial, and may be advantageously employed when such remedies are required. It has been given in the diarrhœa of horned cattle with good effect. The dose is about half a pint; but a horse accustomed to cordials will take more.

WINTER'S BARK. A pleasant stimulant; and though not commonly used in veterinary practice, may be given with good effect in cases of indigestion and weakness of stomach.

The dose, one ounce every morning.

WOLF'S BANE, or *Aconite*. A dangerous medicine in the horse, and never employed; its effect having been ascertained upon glandered horses.

WORM SEED. Not used in veterinary medicine.

WORMWOOD, a strong aromatic bitter, but rarely employed as an internal remedy. It is a principal ingredient in fomentations. Its essential oil is very strong, and is sometimes added to worm-balls, but it does not appear to possess any peculiar qualities.

WORT. An infusion of malt, and a very useful drink in the decline of fevers, being nutritious and easy of digestion.

ZEDOARY. The root is a pleasant aromatic stimulant, not unlike turmerick, but stronger. It has been recommended in jaundice, or yellows, but can be serviceable only by counteracting the debilitating effects of that disorder.

ZINC. This metal affords only two medicinal preparations, viz. vitriolated zinc and flowers of zinc. The former we have already noticed: the other is scarcely ever employed in veterinary practice, but may be serviceable as an application to ulcers, to promote their healing, or cicatrization, as it is termed.

THE VETERINARY PHARMACOPŒIA;

OR,

INSTRUCTIONS

FOR

COMPOUNDING HORSE MEDICINES,

AND

PREPARING THE VARIOUS SUBSTANCES

EMPLOYED IN VETERINARY PRACTICE,

In the most Convenient and Efficacious Manner;

WITH

A LARGE COLLECTION OF VALUABLE RECEIPTS,

OF ESTABLISHED EFFICACY.

INTRODUCTION.

In describing the various substances used in medicine, it was thought adviseable to adopt an alphabetical order, in preference to those more scientific modes of arrangement which have been recommended by medical writers; as not only more simple, but better adapted to the general reader. In this part of our work, however, it will be necessary to bring the compositions or formulæ under certain classes: the receipts for *Physic*, for example, will come under the head *Cathartics*; but these classes will be placed alphabetically.

In the Materia Medica, all the simple vegetable medicines have been faithfully described, their particular effects upon the horse pointed out, and the different doses in which they may be given with safety and advantage accurately noticed; at the same time, such observations have been introduced respecting the diseases in which the medicines are applicable as appeared requisite; all those chemical preparations which are employed in the practice of medicine are likewise fully described.

The PHARMACOPŒIA contains instructions for compounding or mixing those simple medicines and preparations in such a way, that they may mutually assist each other in their curative operation, and sometimes produce effects that cannot be obtained from either of them individually. Many of those persons who undertake to compound horse medicine, are unacquainted with chemistry, and not aware, that by improper mixtures, the original qualities of the ingredients may be destroyed: thus, by mixing vitriolic acid, or oil of vitriol, with pure soda, both of which are powerful caustics, we produce that innocent compound, termed *Glauber's salt*. Mistakes of this kind are very common in books of farriery, which therefore can seldom be depended upon.

Another very common error in those books, as well as in the recipes of farriers in general, is, that instead of mixing medicines that are similar in their nature, and capable of co-operating in the removal of diseases, they frequently direct the most heterogeneous mixtures, uniting medicines of opposite qualities in the same *ball* or *drench*.

In our Pharmacopœia we have endeavoured to avoid those errors: the compounds are directed according to the principles of chemistry; and such only are recommended as have been found efficacious in practice.

PHARMACOPŒIA.

ABLUENTS. Medicines that were supposed to purify the blood, by carrying off any noxious matter that may be mixed with it.

It has been proved that noxious matter does sometimes exist in the blood *; but we do not know any medicine that has the power of *washing it away*, or expelling it, as the term *abluent* implies. The *glanders* of horses seems to arise from the introduction of a peculiar poison into the mass of blood, like the venereal disease; but the effect of this poison is produced upon the *solids*, the blood serving merely as a vehicle for it. It is generally known that mercury is a remedy

* The blood of a *glandered* horse was transfused into the jugular vein of a healthy ass, by Mr. Coleman; after a short time the ass was completely glandered.

for the venereal disease; but it does not appear to produce its beneficial effects by *expelling* the venereal poison from the system, or by *uniting with it*, and changing its poisonous quality: it is more probable that it renders the *solids* unsusceptible of the venereal action; and that by continuing the use of it a sufficient length of time, the poison will be evacuated from the system, like all other extraneous or noxious matter which may happen to get into it; an opinion which I believe originated with the late Mr. John Hunter.

Is it not probable that the glanders (a disease which has hitherto proved incurable) may at some future period be successfully treated, by keeping this opinion in view?

This idea is thrown out as a hint to those who may wish to investigate the *Glanders*, and endeavour to find out a remedy for so destructive a disease.

ABSORBENTS. Medicines that neutralize or destroy any acid matter that may happen to be in the stomach; which in the horse is indicated by a disposition to eat litter or dirt in preference to hay.

It is probable that this condition of the

stomach depends upon debility, and imperfect secretion of the gastric juice, or an unhealthy action of the liver: it will be adviseable, therefore, to give *tonics* and stimulants with the absorbent medicines; and these I have always found more efficacious if preceded by a laxative.

ABSORBENTS.

No. 1. Prepared chalk, six drams.
Powdered gentian, two drams.
Aromatic powder, one dram and a half.

No. 2. Prepared kali, one dram and a half.
Powdered quassia, two drams.
Powdered ginger, two drams.
Oil of caraway, twelve drops.—Mix.

No. 3. Prepared natron, or soda, two drams.
Powdered columba, three drams.
Cassia, powdered, one dram.—Mix.

These medicines may be made into balls with a little flour and syrup, or honey. One ball should be given every morning.

ALEXIPHARMICS. It was formerly supposed that certain compositions possessed the specific power of expelling poisons of all kinds from the system; of this kind were *Venice Treacle* and *Andromachus's treacle*, which were termed Alexipharmics.

In modern practice those medicines are never used, nor is any credit given to the opinion; so that the term is become obsolete.

ALTERATIVES. Medicines that gradually change the system from a diseased to a healthy state: the medicines commonly used as *alteratives* are given in very small doses, so that their effect is scarcely perceptible; nor do they prevent a horse from continuing his usual work, or render it necessary to make any alteration in his diet. In the *Materia Medica*, we endeavoured to shew the propriety of dividing alteratives into three classes, viz. laxative, diuretic, and diaphoretic, which plan we shall now follow.

LAXATIVE ALTERATIVES.

No. 1. Barbadoes aloes, ten drams.
Castile soap, one ounce.
Aniseed, powdered, one ounce and a half.
Oil of cloves, 20 drops.
Syrup enough to form the mass for four balls, one to be taken every morning until the bowels are moderately opened.

No. 2. Barbadoes aloes, one ounce.
Calomel, one dram and a half.

Golden sulphur of antimony, half an ounce.

Powdered caraway seeds, one ounce.

Syrup enough to form the mass, to be divided into four balls, and given like the preceding No. 1.

No. 3. Flower of sulphur, six ounces.
Tartarized antimony, six drams.
Mix for six doses.

This may be given in the form of powder, daily; few horses will refuse it in their corn, which should be previously moistened.

No. 4. Liver of antimony, three ounces.
Cream of tartar, four ounces.

Mix for six doses, one to be given daily, or until the bowels are opened.

DIURETIC ALTERATIVES.

No. 1. Yellow rosin, powdered, six drams.
Nitre, half an ounce.

Mix for one dose, to be given daily.

No. 2. Flower of sulphur and liver of antimony, of each half an ounce.
Nitre, three drams.

Mix for one dose, to be given daily.

No. 3. Prepared natron, or soda (reduced to powder by exposure to the air), one ounce

Castile soap, six drams.
Powdered resin, two ounces.
Liquorice powder, half an ounce.

Barbadoes tar, enough to form a mass for six balls, one to be given daily.

DIAPHORETIC ALTERATIVES.

No. 1. Antimony, finely levigated, one ounce.

To be given daily in the horse's corn.

No. 2. Unwashed calx of antimony, three drams.
Powdered anise seed, one ounce and a half.

Mix for two doses, one to be given daily.

No. 3. Tartarized antimony, one dram.
Strong muriate of quicksilver, twelve grains.
Arrow-root prepared, half an ounce.
Grains of paradise, two drams.
Oil of caraway, ten drops.

Syrup enough to form the ball for one dose.

Remark—This is an excellent remedy in obstinate cutaneous complaints, as surfeit, farcy, &c. The quantity of muriate of quicksilver should be gradually increased; (See Sublimate, Mat. Med.) but if it occasion sickness, griping, or purging, or if it

makes the mouth sore, it must be discontinued a short time, and afterwards given in diminished doses. This remark applies to all the preparations of mercury, when given as *alteratives.*

ANALEPTICS. Medicines that recruit the strength. (See Restoratives, Cordials, and Tonics.)

The celebrated *James's Analeptic Pills* appear to be composed principally of aloes and James's powder. (See Febrifuges.)

ANODYNES. Medicines that relieve pain; of which opium is the most powerful. When *pain* is occasioned by *inflammation* it is seldom proper to employ opium, or any medicine of that kind; but when it depends upon *spasm* or *irritation,* no medicines are so beneficial. In inflammation of the bowels, for example, opium would certainly do much injury; but in the flatulent or spasmodic colic, it seldom fails of giving relief. (See Anodynes, Mat. Med.)

ANODYNES.

No. 1. Opium, one dram.
Castile soap, two drams.
Powdered aniseed, half an ounce.

To be made into a ball with syrup, for one dose.

No. 2. Opium and balsam of tolu, of each one dram.
Camphor, one dram and a half.
Castile soap, two drams.
To be made into a ball for one dose.

No. 3. Opium, two scruples.
Russia castor, two drams.
To be mixed with peppermint-water, eight ounces.
To this add expeditiously, of ether, six drams.

This drench must be given with great expedition, as the ether evaporates in the common temperature of the atmosphere. The effects of henbane, hemlock, and other narcotics, are very uncertain, and cannot be depended upon.

ANTISEPTICS. This term is applied to medicines that correct or prevent putridity.

The only occasion, nearly, on which they are required in veterinary practice is, when wounds or bruises shew a tendency to gangrene or mortification, discharging an offensive ill-looking matter. (See Antiseptics, Mat. Med.)

Antiseptics are employed also externally. (See Poultice and Fomentation.)

ANTISEPTIC MIXTURE, for gangrene or mortification of the external parts.

No. 1. Take of Peruvian bark, one ounce.
Powdered ginger, two drams.
Opium, one dram.—Mix for one dose.

No. 2. Powdered snake-root, one ounce.
Salt of hartshorn, one dram.
Cassia, powdered, one dram and a half.—Mix for one dose.

No. 3. Opium and salt of hartshorn, of each one dram.
Camphor, one dram and a half.
Aromatic powder, two drams.
Mix for one dose.

No. 4. Colombo-root, powdered, one ounce.
Capsicum, one dram and a half.
Oil of caraway, fifteen drops.

Remark—These receipts may be given either in form of balls or drenches; but I think the latter preferable, as we can employ a vehicle that will contribute considerably to the effect of the medicine. The best liquid for this purpose is port wine; porter, or good strong beer, will however generally answer the purpose very well. The drench should be given once or twice in

twenty-four hours, according to the effect produced, and the nature of the case. A strong decoction of oak bark is not a bad vehicle for those medicines. We have before observed, that *opium* is liable to produce costiveness. When this effect is observed from it, a glyster of water-gruel will be useful. The dose of bark and snake-root may be increased, when the quantity prescribed does not produce the desired effect.

A small addition may be also made to the doses of salt of hartshorn and camphor, should it be thought necessary. We have not recommended any receipt for *internal* gangrene or mortification, because it is always fatal in the horse; and they are not subject to those disorders termed putrid or typhus fevers, so dangerous in the human subject. But in cases of *external* mortification, the above receipts will be found extremely serviceable; they should be assisted, however, by a proper diet, consisting of such food as is nutritious and easy of digestion; such as bruised oats and malt, with a moderate quantity of carrots: when the horse is off his food, he should be drenched with good water-gruel, or arrow-root, and sweet wort

Great attention is required in the groom, as well as frequent and assiduous application of proper fomentations, &c.

ANTISPASMODICS. Medicines that cure or relieve spasmodic diseases. (See Materia Medica.)

ANTISPASMODIC MIXTURE, for flatulent colic.

No. 1. Oil of turpentine, two ounces.
Cold water-gruel, one pint.
Mix for one dose.

Remark—To an inexperienced person, this might appear a very formidable remedy; but it is not only very safe, but seldom fails of giving relief: many practitioners give it in much larger doses; indeed I have often known four ounces given at a dose, with the best effect.

No. 2. Camphor, one dram and a half.
Ether, six drams.
Essence of peppermint, from one to two drams.
Water, one pint.—Mix for one dose.

Essence of Peppermint is made by dissolving one part of oil of *peppermint* in five of rectified spirit.

The bottle must be well shaken, in order

to mix the ether with the other ingredients, and the camphor should be first dissolved in the *essence of peppermint.*

No. 3. Tincture of opium, one ounce,
Oil of juniper, two drams.
Sweet spirit of nitre, one ounce.
Water, a pint—Mix for one dose.

No. 4. Opium, one dram.
Camphor, one dram and a half.
Powdered ginger, two drams.
Castile soap, three drams.

To be made into a ball with syrup, for one dose.

Remark—The *flatulent*, or *spasmodic colic*, must be carefully distinguished from the *inflammatory*, and from that which depends upon costiveness. It is *always* necessary to empty the bowels by means of glysters; and should the horse have appeared dull and heavy previous to the attack, it will be adviseable to bleed. If costiveness attends it, give a laxative drench after the paroxysm, which will prevent its return.

Those who travel with crib-biting horses, or one that is often attacked with this complaint, should always have a remedy at hand, for which purpose No. 4. is recommended.

It may be easily dissolved in strong beer, or peppermint-water, and given as a drench. To distinguish the inflammatory colic the *Compendium* may be consulted.

ANTISPASMODIC MIXTURES, for locked-jaw.

No. 1. Opium, one dram and a half.
Camphor, two drams.
Ginger, three drams.

To be made into a ball with syrup, for one dose, or mixed with some stimulating fluid, (such as strong brandy and water, about eight ounces; or eight ounces of spirituous peppermint-water), and given as a *drench*.

No. 2. Ether, one ounce.
Compound tincture of cardamoms, four ounces.
Peppermint-water, six ounces.
Mix for one dose.

It is necessary to observe, that the *locked-jaw* generally proves fatal to horses; but it is worth while, when the jaws are not so firmly closed as to prevent the exhibition of medicine, to try the above. I have known one case in which camphor and opium succeeded: it was necessary, however, to give it in considerable doses, beginning with that which we have prescribed, and gradually

increasing it. Some practitioners recommend *blisters*, and others *fomentations*, to the jaws; stimulating glysters and the cold bath have also been advised. Strong blisters to the spine, from the withers to the tail, have been recommended as the best remedy.

ANTISPASMODIC MIXTURES, for old or chronic cough.

No. 1. Assafœtida, half an ounce.
Powdered squill, one dram.
Castile soap and Venice turpentine, of each two drams.—Mix for one dose.

No. 2. Gum ammoniacum, half an ounce.
Balsam of tolu, two drams.
Liquorice powder, and powdered squills, of each one dram.
Oil of aniseed, twenty drops.
Balsam of sulphur, enough to form the ball, for one dose.

No. 3. Powdered squill and camphor, of each one dram.
Powdered opium, half a dram.
Castile soap, two drams.
Strained storax, one dram and a half.
To be made into a ball with syrup, for one dose.

Remark—I have generally found the above receipts more efficacious when preceded by a *laxative ball*, or a course of the *laxative alteratives*.

They are to be given every morning until the desired effect is produced, unless in the mean time they should take off the appetite, or occasion profuse *staling*; in which case they should be discontinued for a few days. When any appearance of *fulness* or *plethora* accompanies those coughs, bleeding is adviseable; and whenever costiveness occurs, a laxative ball should be given.

Coughs which arise from irritation about the throat, are distinguished by their almost constantly harassing the animal; and these are often relieved by emollient drinks, and the following:

No. 4. Opium, one dram.
Castile soap, two drams.
Camphor, one dram and a half.
Oil of aniseed, twenty drops.

To be made into a ball with syrup, for one dose.

In speaking of the *modus operandi* of *expectorants*, we observed that the most effectual medicines of that class possessed a *diu-*

retic quality, and that probably, by carrying off some of the watery parts of the blood by the kidneys, they produced their peculiar effect upon the lungs, diminishing the secretion of thin mucus in the branches of that organ, and removing the cough, which an abundant secretion had occasioned. Most of the medicines we have here recommended for chronic cough, possess a diuretic quality; and it is probable that their good effects depend more upon this than upon their *antispasmodic* power.

Some of the medicines, however, are certainly antispasmodics, and as the greater part are commonly said to act in that way, we have brought them under that head. (See Expectorants.)

ANTISPASMODIC MIXTURES, for suppression of urine, or pain and difficulty in voiding it.

No. 1. Purified nitre, one ounce.
Camphor, two drams.

Remark—This may be made into a ball with mucilage of gum arabic and a little flour; or mixed with linseed infusion; or any mucilaginous vehicle, and given as a drench. This medicine has proved so uni-

formly successful, that I shall not add any other formulæ, but must observe that an emollient glyster is often a necessary assistant; and when the horse appears to be of a full habit, or *plethoric*, bleeding is also adviseable. If the complaint returns in a short time, give a laxative drench after repeating the above medicine.*

It is the opinion of many practitioners that the *staggers* sometimes depend upon a diseased condition of the stomach, and that certain *antispasmodics* are the best remedies. I am satisfied, however, that copious and timely bleeding is almost always necessary in this complaint, but do not dispute the occasional utility of those medicines, particularly the following: [Since this was written the author has met with many cases of

* The author is aware that pain and difficulty in voiding urine, frequently in the human body, depend on inflammation of the bladder, in which case nitre would be an improper medicine. This is sometimes the case in the horse; but the symptoms most commonly arise from a cause which the above medicine speedily removes; and which may be distinguished from an inflammatory affection by its not being accompanied by quick pulse, loss of appetite, and other symptoms of fever, and *inflammation of the bladder.* (See the author's first vol.)

staggers, which were caused by obstruction in the stomach or bowels: in these cases strong purgatives with stimulants were the only effectual remedies. See Vol. I., eighth edition.]

No. 1. Volatile tincture of valerian, one ounce.
Powdered valerian, one ounce and a half.
Peppermint-water, eight ounces.
Mix for one dose.

No. 2. Fœtid spirit of ammonia, one ounce.
Camphor, one dram.
Ether, half an ounce.
Mint-water, eight ounces.
Mix for one dose.

No. 3. Salt of hartshorn, one dram and a half.
Assafœtida, six drams.
Oil of peppermint, ten drops.

To be made into a ball, for one dose, by means of a little syrup and flour.

Remark—I have seen a good effect from the following cathartic drench.

CATHARTIC DRENCH.

Barbadoes aloes, six drams to one ounce.

Calomel, one dram to three drams.
Myrrh, in powder, two drams.
Ginger, ditto, one dram and a half.

Syrup enough to form the ball, for one dose.

Remark—In *staggers* the bowels are generally rather torpid, and in some cases are not affected by the strongest purgatives. The above dose therefore will, in general, operate only as a mild laxative: for a large draft-horse one ounce or ten drams of aloes will not be too much.

ASTRINGENTS. Medicines that suppress unnatural or increased evacuations, such as *diarrhœa*, *diabetes*, and profuse sweating.

It is commonly supposed that *astringents* act mechanically, by constringing or condensing the solids. This opinion, however, does not appear to be well founded, since *opium*, which is in many cases the most powerful remedy in morbid evacuations, does not possess those principles which are said to constitute astringency, which are the *gallic acid*, and *tannin*.

Medical writers generally class the prepa-

rations of iron, copper, zinc, and lead, with astringents: these, however, have not been found very useful as internal remedies in the horse; and whenever they prove serviceable, it is in cases of debility, in which tonics are required.

ASTRINGENTS, for diarrhœa.

No. 1. Opium, one dram.
Ginger, one dram and a half.
Prepared chalk, six drams.

Mix into a ball with treacle, syrup, or honey, for one dose.

No. 2. Gum kino, two drams.
Alûm, half an ounce.
Aromatic powder, one dram and a half.
Castile soap, two drams.
Honey enough to form the ball, for one dose.—Mix.

No. 3. Powdered rhubarb, one ounce.
Prepared natron, two drams.
Cassia, powdered, one dram and a half.
Oil of mint, twenty drops.

To be mixed as above for one dose.

Remark—I have often seen mischief done

by giving astringents in diarrhœa too hastily; and think it adviseable, in general, to give in the first place a laxative. There are external applications termed astringents, which are those which dry up sores, or diminish their discharge.

ASTRINGENT BALL, for diabetes.

Opium, one dram.
Powdered ginger, two drams.
Powdered oak bark, one ounce.

To be given in a pint of oak bark decoction.

EXTERNAL ASTRINGENTS.

No. 1. Powdered alum, four ounces.
Armenian bole, one ounce.—Mix.

No. 2. White vitriol, four ounces.
Flowers of zinc, one ounce.—Mix.

No. 3. A strong goulard mixture.

No. 4. A solution of blue vitriol.

No. 5. Muriate of iron, one ounce.
Water, eight ounces.—Mix.

No. 6. Flowers of zinc (alone).

ASTRINGENT OINTMENTS.

No. 1. Venice turpentine, four ounces.
Hog's lard, six ounces.

To be melted over a slow fire; and when

rather cool, but while it is liquid, add sugar of lead finely powdered, two ounces. Stir the mixture until it is cold.

No. 2. Hog's lard, four ounces.

Oil of rosemary, two drams.

Finely powdered white lead, an ounce and a half.—Mix.

Remark—The astringent powders and ointments are designed chiefly as remedies for the grease, after the inflammation of the part has been in great measure removed by proper poultices: but the ointment is applicable only to those ulcerations or cracks, which are so often an effect of that disease.

ATTENUANTS. Medicines that were supposed to attenuate or thin the blood, many diseases being thought at that time to depend upon a preternatural thickness or viscidity of that fluid. This doctrine, however, is now known to be erroneous, and the term of course not used. The medicines thus named, were soap, nitre, and other neutral salts, and water.

BACK OINTMENT. (See Ointment, Liniments, and Lotions for Sore Backs.)

BALLS. We have made some observations on this subject in the Materia Medica: but it is necessary to add in this place, that whenever a ball is found to exceed the proper size, which is that of a middle-sized egg, it is adviseable to divide it, as much injury has been done by those large balls which are made by farriers, particularly when they have been kept so long as to become dry. In making balls, the dry ingredients should be finely powdered and well mixed; the liquid for forming them into balls must be adapted to the nature of the other ingredients. If they are of a resinous kind, such as gum-guaiacum, &c. balsam of Peru, balsam of capivy, or Venice turpentine, are proper substances to form the ball; but if they consist of roots, bark, or wood, &c. syrup, treacle, or honey, may be used for the purpose. When the ingredients are difficult of cohesion, which is the case with nitre, golden sulphur of antimony, and many others, the best thing for uniting them into a ball is mucilage of gum arabic. This will answer the purpose more effectually, if a little starch or flour be first mixed with the

powders. When a ball contains any very stimulating or acrid ingredient, such as essential oil, Cayenne pepper, &c., and particularly if there be arsenic or sublimate in it, the stomach should not be empty when it is given, and some water or water-gruel should be given immediately after.

It is generally necessary to give balls wrapt in paper; but for this purpose the thinnest tissue should be preferred.

BITES. (See Ointments for Bites and Stings.)

BLISTERS. Applications which inflame the skin, and cause watery bladders to form upon it.

They are used on various occasions, and form a very important class of remedies.

MILD BLISTER OINTMENT.

No. 1. Hog's-lard, four ounces.
Venice turpentine, one ounce.
Powdered cantharides, six drams.—Mix.

No. 2. Oil of bay, three ounces.
Oil of origanum, two drams.
Powdered cantharides, half an ounce.
—Mix.

STRONGER BLISTER OINTMENT.

No. 1. Oil of turpentine, one ounce.
Vitriolic, acid by measure, two drams.
Mix carefully in a chimney or open place, and add of hog's lard four ounces.
Powdered cantharides, one ounce.—Mix.

No. 2. Mercurial ointment, and oil of bay, of each two ounces.
Barbadoes tar, one ounce.
Oil of rosemary, two drams.
Cantharides, powdered, one ounce.—Mix.

No. 3. Common tar, four ounces.
Vitriolic acid, three drams.
Mix carefully, previously melting the tar:
Oil of turpentine, half an ounce.
Hog's lard, two ounces.
Cantharides, powdered, one ounce and a half.—Mix.

STRONGEST BLISTER.

No. 1. Strong mercurial ointment, four ounces.
Oil of origanum, half an ounce.
Finely powdered euphorbium, three drams.

Powdered cantharides, half an ounce.—Mix.

No. 2. Strong mercurial ointment, two ounces.

Oil of origanum, two drams.

Sublimate, finely powdered, two drams.

Cantharides, powdered, six drams.—Mix.

Remark—The strong blisters, particularly the last, is a good remedy for splents and bone spavins, but they must be used with caution. The last is apt to destroy the hair, an inconvenience that must often be submitted to in curing a bone spavin or splent. *Blisters* are the most effectual applications for removing those swellings and lamenesses which are the consequences of strains, bruises, and hard work; but they should never be applied while the inflammation is considerable. When blisters are employed for the removal of bog or blood spavins, curbs, or windgalls, they generally require to be repeated two or three times. Blisters are often employed to remove *internal* inflammation, particularly when the lungs are

attacked; for this purpose I think the following mustard blister by far the best.

MUSTARD BLISTER.

Best flower of mustard, eight ounces.

Water enough to make it into a paste.

To this add oil of turpentine, two ounces, water of pure ammonia, one ounce. To be well mixed, and rubbed into the sides with the hand. If the bowels are affected, it should be rubbed all over the belly: and if the kidneys, upon the loins. The friction should be continued for some time, and the parts afterwards covered. After a short time, swelling and inflammation will take place, and sometimes in a considerable degree; but it will greatly diminish the *internal inflammation*, and often preserve the animal's life. (See Bowels, Mat. Med.)

CARDIACS. (See Cordials.)

CARMINATIVES. Remedies for the flatulent colic, commonly termed *fret* or *gripes*. (See Antispasmodics, page 191, where several receipts are given for the purpose.) We shall add, in this place, a few domestic remedies, which may be employed when medicines cannot be procured in time.

1st. A pint of strong peppermint-water, with about four ounces of gin, and any kind of spice. 2d. A pint of port wine, with spice or ginger. 3d. Half a pint of gin diluted with four ounces of water, and a little ginger. I have seen the complaint removed by warm beer and ginger, or a cordial ball, mixed with warm beer.

It may not be amiss to repeat the caution we have given, respecting the necessity of distinguishing the *flatulent* from the *inflammatory colic*; as in the latter, the above remedies would be highly pernicious: for this purpose the reader may consult the *Compendium of the Veterinary Art*; in which both diseases are fully described.

CATHARTICS. Medicines that excite purging. The preparations employed for this purpose are commonly termed physic.

MILD PHYSIC.

No. 1. Barbadoes aloes, half an ounce.
Prepared natron, one dram and a half.
Powdered cassia, one dram.
Oil of aniseed, twenty-five drops.

To be made into a ball with honey, for one dose.

No. 2. Barbadoes aloes, half an ounce.
Calomel, half a dram.
Ginger, one dram.
Castile soap, three drams.
Oil of aniseed, twenty drops.

Syrup enough to form the ball for one dose.

STRONG PHYSIC.

No. 1. Bardadoes aloes, six drams.
Almond soap, three drams.
Oil of caraway, twenty drops.

Aromatic confection enough to form the ball for one dose.

No. 2. Barbadoes aloes, six drams.
Calomel, one dram.
Almond soap, three drams.

Aromatic confection enough to form the ball for one dose.

Remark—The strength of the above balls may be varied by increasing or diminishing the quantity of aloes. A *cathartic* may be given in the form of a drench when a speedy effect is required; for this purpose dissolve one of the balls in warm water-gruel

There is a wonderful difference in horses with respect to the quantity of purgative medicine necessary to produce a proper effect;

and as violent purgation, or too strong physic, often does much injury, and sometimes proves destructive, it is always adviseable to give a moderate dose to a horse whose strength and constitution we are not acquainted with. I have often met with horses that were effectually purged by half an ounce of aloes, while to others I have given an ounce, without any effect. On the other hand, again, I have frequently seen the same dose do much injury: in one case, a horse was nearly destroyed by taking half an ounce of aloes, and half a dram of calomel. I lately met with an intance of a horse being evidently killed by taking one ounce. Some, nay several, have been destroyed by the doses recommended in books of farriery, in which aloes have been prescribed in the dose of one ounce and a half. At the same time, it must be acknowledged, that these accidents are not *very* frequent, and that hundreds of horses take those strong doses apparently with impunity. Still there is one bad effect which must result from violent purgation, of which few people are aware. The debility thus produced lays a foundation for many diseases; and I have known

even blindness produced by it: the whole system is rendered more irritable, and consequently more susceptible of disease.

CAUSTICS. Substances which burn or destroy any part of the body to which they are applied. They are of great use in veterinary practice for destroying unnatural excrescences, cleansing foul ulcers and sinuses, so as to bring them to a healthy state, and curable by more simple applications. Caustics may be divided into liquid and solid, strong and mild. The mild caustics are called also escharotics, and are more useful than the stronger caustics, which are too violent in their action in many cases, and often require to be diluted with water, spirit, or unctuous substances, according to the nature of the case.

SOLID CAUSTICS, STRONG.

No. 1. The red hot iron.
(See Firing, Mat. Med.)
No. 2. Pure kali with lime.
No. 3. Nitrated silver, or lunar caustic.
No. 4. Nitrated copper.

MILD CAUSTICS, SOLID.

No. 1. Acetated copper, or distilled verdigris.

No. 2. Vitriolated copper, or blue vitriol.
No. 3. Red nitrated quicksilver, or red precipitate.
No. 4. Burnt alum.
No. 5. Common verdigris.

Remark—The strong caustics are generally sold in a convenient form for application; but the *mild* require to be finely powdered and sprinkled on the ulcer: they are sometimes mixed with digestive ointments to increase their power.

STRONG CAUSTICS, LIQUID.

No. 1. The vitriolic and nitrous acids, which are very powerful, and must be used cautiously: they may be diluted with different proportions of water, so as to be applicable to many purposes.
No. 2. Nitrous acid, one ounce.
Quicksilver, half an ounce.

Place them in a large gallipot, or open phial, and take care to avoid the noxious fumes which arise. When the quicksilver is perfectly dissolved, and the mixture cold, it may be put into a smaller phial and corked.

Remark—This is a strong and efficacious caustic; it is a certain remedy for the foot-

rot in sheep, and often effectual in canker of the horse's foot, provided these complaints are properly managed in other respects. It is sometimes mixed with melted hog's lard to form a strong *detergent* ointment.

No. 3. Nitrous acid, one ounce.
Copper filings, half an ounce.—Mix.

The copper is to be dissolved like the former, the fumes being equally hurtful. This caustic is very little, if at all, inferior to the former, and applicable to the same purposes.

No. 4. Muriate of antimony, or butter of antimony.

No. 5. Muriate of quicksilver, or sublimate, one dram.
Muriated acid, two drams.

Remark—This is a very powerful caustic, and generally requires dilution.

MILD CAUSTICS, LIQUID.

No. 1. Solution of blue vitriol.

No. 2. Any of the stronger caustics, except butter of antimony, diluted with an equal quantity, or more, of water.

No. 3. Muriatic acid.

No. 4. Muriate of iron.

CHARGES. Adhesive plasters which are softened or liquified in a ladle by a gentle heat, and then applied to the legs, from the knee and hock joints to the foot, as a remedy for windgalls and old lamenesses, arising from strains or hard work.

As soon as the plaster is applied, the part is covered with short tow, and the horse sent to grass.

A CHARGE.

Burgundy pitch, four ounces.
Barbadoes tar, six ounces.
Bees-wax, two ounces.
Red lead, four ounces.

The three first are to be melted together, and then the latter is to be added. The mixture is to be constantly stirred until sufficiently cold to be applied; and if it prove too thick when cold it may be softened with a little oil or lard.

Farriers generally mix Dragon's Blood (as it is commonly called), from an idea that it has a strengthening quality, others recommend bole armenic. It appears, however, that charges act as a bandage only, compressing equally, and for a considerable time, the joints, tendons, &c.

CONDITION. This term implies, that a horse enjoys the highest degree of health and vigour of which he is capable. A horse may be fat and sleek, but unfit for those exertions which are so often required from him. This subject has been fully treated of in the *Compendium;* and we have only to observe in this place, that many horses are destroyed, and numerous diseases produced, by forcing them to exertions to which they are unequal; wherefore, it is of great importance, that their *condition* should be brought to perfection, before they are employed in any severe exercise, such as racing, hunting, quick travelling, or heavy draft. In getting horses into *condition*, great advantage will be derived from the occasional use of laxatives and diuretics, in the form of *Alteratives;* but regular exercise, proportioned and adapted in point of duration and *pace*, to their *feed*, the kind of employment for which they are required, and the state of their health, is of the last importance.

CORDIALS. Medicines which cause a *temporary* augmentation of strength and spirits; and if employed properly, are, on

some occasions, capable of producing permanently good effects. They are more beneficial in general to old horses than to young; more particularly to those that have been worked hard, and accustomed to such medicines, as well as to high feeding and warm stables. Cordials become remarkably serviceable to draft-horses, when they work hard, and have but indifferent forage. They gently stimulate the stomach, and increase its digestive power; whereby they are capable, I apprehend, of preventing, on many occasions, that fatal disease, the *staggers*.

Cordials have an excellent effect, when the animal has been fatigued with a long run, or a severe journey, refusing his food, and seemingly exhausted. A *good* cordial preparation at such times restores the appetite, promotes digestion, and renovates the strength and spirits. I do not mean, however, that the *cordial balls* commonly made up have this useful property. On the contrary, they often do harm, but most commonly they are quite inert; for example, Bracken's cordial, which is the receipt generally used, has a considerable proportion of

sulphur, and other useless drugs, in its composition.

CORDIAL BALLS.

No. 1. Powdered caraway seeds, six drams.
Ginger, two drams.
Oil of cloves, twenty drops.
Honey or treacle enough to form the ball, for one dose.

No. 2. Powdered aniseed, six drams.
——— cardamoms, two drams.
——— cassia, one dram.
Oil of caraway, twenty drops.

To be made into a ball with honey, for one dose.

No. 3. Powdered caraway seeds, half an ounce.
Grains of paradise, three drams.
Aromatic powder, one dram.
Essential oil of cummin-seed, twenty drops.

To be made into a ball with honey, for one dose.

No. 4. Powdered aniseed, half an ounce.
Ginger, three drams.
Oil of caraway, fifteen drops.

To be made into a ball, for one dose.

Remark—The above receipts afford a

sufficient variety of preparations. The strength may be easily increased or diminished, when found necessary. They are all of a very stimulating nature, and not to be employed but on the occasions we have pointed out. An indiscriminate and frequent use of cordials, does great mischief, and is the cause of many diseases; though, as we have before observed, when judiciously employed, they are extremely beneficial. We shall now give some receipts for *pectoral cordials*, which differ from the foregoing, by being less stimulating, and containing ingredients that promote expectoration, and alleviate or cure *old coughs*, which are accompanied with some degree of debility, flatulency, and indigestion: when costiveness occurs during their use, it is to be removed by a gentle laxative. (See Laxatives.)

PECTORAL CORDIAL BALLS.

No. 1. Powdered aniseed, half an ounce.
——— squill, one dram.
——— myrrh, one dram and a half.

Balsam of Peru, enough to form the ball, for one dose.

No 2. Liquorice powder, half an ounce.
Gum ammoniacum, three drams.
Balsam of tolu, one dram and a half.
Powdered squill, one dram.

Anisated balsam of sulphur, enough to form the ball for one dose.

No. 3. Elecampe powder, half an ounce.
Ginger, one dram and a half.
Powdered squill, one dram.
Oil of aniseed, twenty drops.

Syrup of tolu, enough to form the ball for one dose. (See Antispasmodic Mixtures for Chronic Coughs.)

Medicines are sometimes named *stomachic* and *tonic* cordials: for these we refer the reader to the article *Tonics* and *Stomachics*.

CORROSIVE. (See Caustics.)

DECOCTIONS. These are made by boiling medicines in water until the latter has extracted all its virtues. This operation, it is obvious, is not suited to those substances, whose medical qualities depend on a volatile, or evaporable principle.

DEMULCENTS. Medicines which sheathe the parts, so as to defend them from the action of any irritating substance. The best medicines of this kind are, a solution of gum

arabic, decoction of linseed or marshmallows, or any thing that is oily and mucilaginous. They are employed chiefly in irritation of the bowels, kidneys, and bladder; also in coughs and irritation of the lungs.

DEOBSTRUENTS. Medicines that are supposed to be capable of removing *obstructions*. Obstinate coughs and asthmas have been attributed to this cause; and the most *ponderous* medicines were recommended for their removal, at a time when many diseases and functions of animals were explained upon mechanical principles. Thus we find cinnabar of antimony, Æthiop's mineral, &c., prescribed on those occasions. The theory has been found erroneous, and of course the practice built upon it must be imperfect. It is necessary, however, to observe, that certain medicines, termed *Deobstruent*, such as calomel, have been sometimes found useful in those diseases of the liver which are said to arise from obstruction.

DETERGENTS. A name given to applications which have the property of cleansing foul ulcers, and bringing them to a healthy state, so that they may be cured by

more simple remedies. The term has been applied also to *internal* remedies, which were supposed to heal ulceration of the lungs, kidneys, &c. but we shall confine it to *external* applications, being unacquainted with any medicine that has the power of curing ulcerated lungs or kidneys.

DETERGENT OINTMENT.

No. 1. Mutton suet, four ounces.
Venice turpentine, six ounces.
Red precipitate, finely powdered, two ounces.—Mix.

Melt the suet and turpentine over a slow fire, and when nearly cold stir in the powder; continue stirring until cold.

No. 2. Hog's lard, four ounces.
Olive oil, one ounce.
Strong liquid caustic, No. 2., one ounce.

Melt the oil and lard; and while the mixture is liquid, but rather cool, add the caustic, and continue stirring with a *wooden* instrument until it is quite cold.

DETERGENT LINIMENT.

No. 1. Oil of turpentine, one ounce.
Vitriolic acid by measure, two drams.

Mix cautiously, in a large gallipot, or

open phial, and in a situation where you may avoid the suffocating fumes which arise. When the mixture is complete and cool, add of linseed oil two ounces.

No. 2. Red precipitate, half an ounce, finely powdered.
Linseed oil, half an ounce.

Mix well in a mortar, and add of oil of origanum, two drams.

No. 3. Crystallized verdigris, finely powdered, one ounce.
Olive oil, one ounce.

To be well mixed in a mortar; then add of Venice turpentine, half an ounce.

DETERGENT LOTIONS.

No. 1. Vitriolated copper, one ounce.
Vitriolic acid, twelve drops.
Water, four ounces.—Mix.

No. 2. Nitrous acid, one ounce.
Vitriolated copper, half an ounce.
Water, eight ounces.—Mix.

DIAPHORETICS. Medicines that increase the insensible perspiration.

In veterinary medicine it is necessary to divide *diaphoretics* into two kinds, which may be called, *antispasmodic* and *stimulating*. The former kind is applicable to fevers; and

receipts, or compositions of that kind, will be found under the head *febrifuges*. The stimulating *diaphoretics* are calculated for horses that are hide-bound, and have rough unhealthy-looking coats, without any other appearance of disease.

STIMULATING DIAPHORETICS.

No. 1. Emetic tartar, one dram and a half.
Camphor, half a dram.
Ginger, two drams.
Opium, one scruple.
Oil of caraways, fifteen drops.
Honey, enough to form the ball for one dose.

No. 2. Powdered caraway seeds, six drams.
Antimonial powder, two drams.
Ginger, one dram.
Oil of aniseed, twenty drops
Honey, enough to form the ball for one dose.

No. 3. Unwashed calx of antimony, two drams.
Ginger and salt of hartshorn, of each one dram.
Opium, two scruples.
Powdered aniseed, half an ounce.
Oil of caraway, fifteen drops.

Syrup, enough to form the ball for one dose.

Remark.—It is essentially necessary to assist the above remedies by regular exercise (at least two hours every day), which may be carried so far as to excite moderate sweating; but the greatest attention must be paid as soon as the horse gets into the stable, nor should the groom discontinue *wisping* until he is perfectly dry.

DIGESTIVES. Applications which promote suppuration in wounds or ulcers.

DIGESTIVE OINTMENT.

No. 1. Hog's lard, four ounces.
Bees'-wax, one ounce.
Venice turpentine, three ounces.
Red nitrated quicksilver, finely powdered, two ounces.

Melt the first three over a slow fire, and while the mixture is liquid, but nearly cold, stir in the powder.

Powdered *verdigris* is sometimes used instead of the *nitrated quicksilver*, but the latter is certainly preferable. We find in some books very elaborate compositions recommended as *digestives*, in which are frankincense, gum elemi, balsam of tolu, com-

mon resin, and various other substances; but the formula or receipt we have given, will be found adequate to every purpose for which *digestives* are wanted, as it may be rendered more or less stimulating, by varying the proportion of *red nitrated quicksilver*, or, as it is more commonly called, *red precipitate*. Oil of turpentine, also, will render it more stimulating.

DILUENTS. Medicines which dilute the blood. If any thing has this power, it must be water, which may be medicated according to the judgment of the practitioner.

DIURETICS. Medicines that stimulate the kidneys, and increase the evacuation of urine.

These are much used in veterinary practice, in cases of grease, swelling of the legs, and other parts: they are employed also as a preventive in horses that are *subject* to those complaints, and with great advantage. They are given either in the form of *ball* or *powder*, and are very convenient remedies, as they do not prevent a horse from working moderately.

DIURETIC BALL.

No. 1. Castile soap.

Powdered resin, of each three drams.
Sal prunella, powdered, four drams.
Oil of juniper, one dram.
Mix for one dose.

First beat the soap and oil of juniper in a mortar, until they become a soft uniform mass, then add the powders, having previously mixed them well.

Should any addition be necessary to form the ball, use mucilage of gum arabic, honey, or flour.

No. 2. Camphor and oil of juniper, of each one dram.
Powdered nitre, half an ounce.
Castile soap, three drams.
Mix for one dose.

First mix the camphor and oil, then add the soap, and beat the mixture well, lastly the nitre, and as much flour as will give it a proper consistence.

DIURETIC POWDERS.

No. 1. Resin and nitre, of each half an ounce.
Mix for one dose.

No. 2. Nitre, six drams.
Camphor, one dram and a half.
Mix for one dose.

DRENCHES. (See Materia Medica.)

EMBROCATIONS. External applications are often so named. The term seems to imply, that it is to be well rubbed on the affected part, with the hand, since its effect will be considerably promoted by friction of this kind.

MUSTARD EMBROCATION.

Take of the best flour of mustard, four ounces.
Water of ammonia, one ounce.
Oil of rosemary, or oil of turpentine, one ounce.

Water, a sufficient quantity to form a thin paste, which is to be well rubbed on the affected part.

EMBROCATION, for strains and bruises.

No. 1. Soft soap, two ounces.
Oil of bay, one ounce.
Water of pure ammonia, one ounce and a half.
Oil of origanum, half an ounce.
Camphorated spirit of wine, two ounces.—Mix.

No. 2. Camphor, half an ounce.
Oil of turpentine, one ounce and half.
Spirit of wine, two ounces.—Mix.

No. 3. Soap liniment, two ounces.

Water of pure ammonia, half an ounce.—Mix.

EMBROCATION, for callous swellings, or bog-spavins, windgalls, enlarged joints, &c.

Strong mercurial ointment, two ounces.
Camphor, half an ounce.
Oil of rosemary, two drams.
Oil of turpentine, one ounce.

BLISTERING EMBROCATION.

Strong mercurial ointment, two ounces.
Oil of bay, one ounce.
Oil of origanum, half an ounce.
Powdered cantharides, half an ounce.
—Mix.

EMOLLIENTS. Medicines that soothe and allay irritation: they are employed both internally and externally. Like demulcents, they defend parts from irritation, by their mucilaginous quality; but they take off irritation in another way, that is, by diluting or weakening the irritating substance. (See Materia Medica.)

When the bowels, kidneys, or bladder, are inflamed or irritated, *emollient* liquids are extremely useful: these are made by

boiling mucilaginous and oily seeds or vegetables in water, or, simply, by dissolving gum in water: in *external* inflammation, or irritation, warm water is the best *emollient*; but it is commonly supposed, that the addition of mucilaginous vegetables renders it more efficacious; I do not believe, however, that this opinion is well founded, nor do I think that any kind of unctuous application is proper in cases where *emollients* are wanted, though we frequently hear various kinds of ointment extolled for their *emollient* virtues.

EMOLLIENT DRENCH, for coughs.

No. 1. Linseed, four ounces.
Boiling water, three pints.

Let them stand together several hours, then strain off the liquid, and add four ounces of honey, for two doses.

No. 2. Marshmallow root, bruised, four ounces.
Water, one quart.

Let them simmer over the fire a short time; then strain off the liquor, and add four ounces of honey, two ounces of linseed oil, and one ounce of powdered gum arabic. This is sufficient for two doses.

Many practitioners add to every dose of these drenches, four or six drams of nitre, which on some occasions, I believe, is serviceable; but we have omitted it here, as *nitre* cannot be considered as an *emollient.*

EMOLLIENT FOMENTATIONS.

No. 1. Marshmallow root, eight ounces.

To be boiled in three quarts of water for an hour or two. The strained liquor makes the fomentation.

It is only necessary to add, that every kind of mucilaginous vegetable is supposed to impart to water an *emollient* quality, and render it fit for an *emollient fomentation.* (See Fomentations.) Ointment of elder, and marshmallows, are used by farriers as *emollients.*

EMULSIONS. Mixtures of oil and water by means of an alkali, or a mucilage.

Emulsions are used principally in coughs, either alone, or as a vehicle for other medicine.

SIMPLE EMULSION.

Linseed oil, two ounces.
Honey, three ounces.
Soft or distilled water, one pint.
Prepared kali, one dram.

Dissolve the honey and kali in the water, and afterwards add the linseed oil: the mixture is then to be well shaken, and it will assume a milky appearance.

PECTORAL EMULSION, for coughs.

No. 1. Simple emulsion, eight ounces.
Camphor, one dram.
Opium, powdered, half a dram.
Oil of aniseed, thirty drops.

Let the camphor be powdered, and rubbed in a mortar with a little sugar, the oil of aniseed, and the opium, then add the *emulsion* gradually.

ERRHINES. Medicines that excite sneezing when applied to the internal parts of the nose. For this purpose, common snuff, with a little powdered hellebore, may be employed. It has been recommended in the gutta serena, or that kind of blindness in which the eye, to a common observer, appears sound, and which is caused by a palsy of the optic nerve. *Errhines* are sometimes applied to the noses of glandered horses; the sneezing it occasions, causes all the matter that is formed to be thrown off: the nose being then carefully wiped with a cloth, the horse is sold as sound, there being

no appearance of a discharge for two or three hours afterwards. This abominable fraud is only practised at country fairs, by the lowest order of horse dealers, who have no reputation to lose.

ESCHAROTICS. This term is applied to the mild caustics, such as red precipitate and verdigris. (See Caustics.)

EXPECTORANTS. Medicines that excite or promote a discharge from the lungs, and thereby remove or alleviate coughs, and thickness of wind.

There is another way in which it is probable expectorants relieve cough, &c. These complaints may sometimes be occasioned by a redundant secretion in the branches of the windpipe; in such cases, medicines that diminish the quantity of fluid in the whole system, by increasing the secretion of urine or perspiration, will of course relieve the complaint, by lessening the quantity of fluid in the branches of the windpipe: hence we may explain the operation of the balsams, turpentines, and various other medicines that are employed as expectorants with good effect, and which manifestly possess a diuretic quality.

EXPECTORANT BALLS.

No. 1. Gum ammoniacum, half an ounce.
Powdered squill, one dram.
Castile soap, two drams.
Honey enough to form the ball for one dose.

No. 2. Assafœtida, three drams.
Galbanum, one dram.
Salt of hartshorn, half a dram.
Ginger, one dram and a half.
Honey enough to form the ball, for one dose.

No. 3. Aromatic powder, two drams.
Camphor, one dram and a half.
Powdered squill, and balsam of tolu, of each one dram.
Honey, enough to form the ball for one dose.

EXTRACTS are made by infusing any substance in a liquid that is capable of dissolving and *extracting* its essential principle, so that it may be procured, free from the other useless parts. When the essential principle is of a resinous nature, we employ rectified spirit to extract it; if it be a compound of gum and resin, proof spirit is better adapted.

By evaporation, we procure the *extract* in a solid state.

EYE-WATER. This term is applied to liquids that remove inflammation from the eye, or that are employed for that purpose.

No. 1. Extract of saturn, one tea-spoon-full.
Camphorated spirit, two tea-spoons-full.
Elder-flower water, half a pint—Mix.

No. 2. Vitriolated zinc, one dram.
Water, one pint.—Mix.

No. 3. Vitriolated zinc, and acetated lead, of each one dram.
Water, twelve ounces.

No. 4. Opium, one dram.
Water, four ounces.—Mix.

FEBRIFUGES. Medicines that tend to relieve or remove fever.

FEVER BALLS.

No. 1. Camphor, one dram and a half.
Nitre, four drams.
Calomel and opium, of each twenty grains.
Syrup, enough to form the ball for one dose.

No. 2. Unwashed calx of antimony, two drams.

Camphor, one dram.
Opium, half a dram.
Compound powder of tragacanth, two drams.
Honey, enough to form the ball for one dose.

No. 3. Emetic tartar, one dram and a half or two drams.
Compound powder of tragacanth, two drams.
Syrup, enough to form the ball for one dose.

No. 4. Camphor, two drams.
Nitre, one ounce.—Mix for one dose.

The above balls are to be given every day, or oftener if the symptoms require it. No. 4. generally acts as a diuretic, and therefore must not be persevered in too long, as it may occasion so profuse an evacuation of urine as to injure the animal. It is proper to observe here, that no medicine will avail much in fever, if bleeding is neglected; and if the fever is violent, external inflammation should be raised by means of rowels in the chest and belly, and the mustard blister applied to the sides.

FIRING. We have noticed this subject

in the Materia Medica: but it remains to be observed, that unless this operation is performed with good instruments and by a skilful hand, an indelible blemish will generally be the consequence. Many farriers pretend to do it while a horse is standing; but this should never be attempted, as it is impossible in this way to perform the operation correctly, and there is always danger of doing mischief. The horse should always be thrown down and properly secured. The edge of the firing-iron is to be rather thinner than the back of a small penknife, and of a round form. The back part of the instrument must be very substantial, that the heat may be retained a sufficient length of time. It is to be applied when of a dull red heat, which in the day-time is scarcely perceptible. The operator is to draw it rather quickly over the skin in perpendicular lines;* but as the iron gets a little cooler, the motion of the hand is to be slower. It may be known when the instrument is applied sufficiently hot, by its leaving a whitish or scorched line upon the skin; but on no

* At present practitioners generally prefer drawing the instrument in an oblique direction.

occasion should the skin be penetrated or divided by the iron. Several irons should be employed, that the operator may be constantly supplied with one sufficiently hot. When this operation is properly performed, the absorbent vessels have their action considerably increased, and are thereby enabled to remove any callous or bony substances which may have been formed about the joints or tendons, in consequence of strains or hard work. It is said also to contract the skin so as to make it act as a bandage to the subjacent parts. The day after the operation, it is adviseable to apply a mild blister to the part. *Firing*, though a severe and painful operation, is often very efficacious, and the only one we are acquainted with for removing callous or bony swellings, which occasion lameness by impeding the action of joints or tendons; but is too frequently made use of when milder remedies may be employed with success. The practice of firing colts with a view to strengthen their joints and tendons, is strongly to be reprobated.

It is always necessary to allow the horse a long run at grass, or rest in a large loose

stable, after he has recovered from the operation; and as long as the inflammation which *firing* occasions continues, the horse should be treated as we have directed after blistering.

FOMENTATIONS. This term is applied to various kinds of decoctions, or medicated liquids, which are employed externally to bathe or foment any inflamed or painful part, or to improve the condition of wounds when they are very irritable, and discharge unhealthy offensive matter, approaching to a state of gangrene or mortification. Fomentations are therefore divided into the following kinds, viz. *emollient*, *antiseptic*, and *anodyne*.

EMOLLIENT FOMENTATION.

No. 1. (See Emollients.)

Boil marshmallows in water for some time, then strain off the liquor, and bathe the affected parts with it while warm.

ANTISEPTIC FOMENTATION.

No. 1. Emollient fomentation, one gallon.
Muriate of ammonia, four ounces.
Camphorated spirit, six ounces.

No. 2. Stale beer grounds and yeast, mixed

with hot water and applied immediately.

ANODYNE FOMENTATION.

No. 1. White poppy heads broken, two dozen.

Hemlock, two handsful.

Boil for two hours gently in six quarts of water.

No. 2. Wormwood dried, and camomile flowers, of each four ounces.

Rue, three ounces.

Bay leaves, two ounces.

Boil them for one hour in a gallon of water.

Remark—The efficacy of a fomentation depends on its being properly applied: therefore we have to observe, that the liquid should be as hot as the hand can bear; or, to be more accurate, a thermometer may be used, and then the proper temperature will be about 120. Large flannel cloths are to be dipped into the fomentation, then lightly wrung out, and spread over the affected part; by the time this gets a little cool, another cloth should be got ready, and applied in the same manner: this operation ought to be continued for half an hour at

least, and repeated three or four times a day. The emollient fomentation is adapted to inflamed swellings, from whatever cause they may arise; and when it cannot be procured, warm water alone will be found an useful substitute. The anodyne fomentation, No. 1, is of great service in wounds or swellings which are accompanied with great pain and irritability. The antiseptic fomentation tends to correct putridity and gangrene, in larger wounds of the lacerated kind, where the matter is thin, ill-coloured, and offensive; but in such cases the assistance of *internal* remedies cannot be dispensed with. (See Compendium.)

FUMIGATIONS. These consist of substances which emit fumes or vapours by the application of heat, or other means. They are generally employed to destroy contagion; and though the *fumigations* recommended in books of farriery, as well as those in common use, are inadequate to that purpose, yet there are certainly some which may be productive of great advantage. *Fumigations* are employed to prevent the spreading of epidemic distempers, or to destroy the contagion of *glanders*; for the for-

mer purpose I cannot, from experience, recommend any thing, though it is not improbable that the *nitrous fumigation* of Dr. C. Smith, or the following, may be found useful; but when a stable is contaminated with *glanders*, I can recommend them with confidence, provided the other means I am about to propose are carefully employed. These are, in the first place, to remove every particle of litter, hay, dust, &c. from the stable; as well as the pail, collar, and every thing which belonged or was used for the infected horse. The rack, manger, and every thing on which the glandered horse could possibly have rubbed his nose, are to be well scraped, and afterwards washed with hot water and soft soap, or potash and lime in water; which has a strong cleansing quality, and if not sufficiently diluted will injure the operator's hands.

After this wash has been employed, the manger, &c. should be well washed with water; for should any potash remain, it might leave a dampness in the stable, from its property of attracting moisture from the atmosphere. The floor or pavement of the stall is also to be carefully washed and

swept. After this, the whole is to be white-washed with whiting and a solution of glue. Before any sound horses are admitted into the stable, the following *fumigation* should be employed; the number of pans in which the materials are placed being adapted to the size of the stable.

Take of common salt, eight ounces.
Manganese, powdered, six ounces.

Let these be well mixed, and placed in an earthen dish; then pour on the mixture, gradually, of vitriolic acid, four ounces. As soon as the latter is added, the operator should leave the stable, shutting both the door and the windows. The fumes which arise from this mixture are highly injurious to the lungs, and must be carefully avoided; therefore this *fumigation* can only be performed in an empty stable. During the whole day the stable-door and windows are to be kept shut; but at night they may be thrown open, that there may be no danger in entering the stable the next morning. I believe this to be the most efficacious of all the *fumigations*, having found that when glanderous matter is exposed to it a short time, it is rendered perfectly harmless. The

fumes which are generated by pouring oil of vitriol, or vitriolic acid, on powdered nitre, are said to be very effectual in destroying human contagion; how far it may be serviceable in veterinary practice, remains to be ascertained; but as the *fevers* of horses do not appear to be infectious, there is no great probability of its proving useful.

GALVANISM. It has been discovered within these few years, that an effect somewhat like electricity may be produced on the body by the application of different metals in a certain way; and that a short time after death, the muscles may be excited to action by the same means, producing the most curious phænomenon. From the name of its discoverer, Galvani, it is termed *Galvanism.* It has lately been employed for the cure of certain diseases, and, it is said, with considerable success; therefore it may be worth a trial in those disorders of the horse for which at present we have no remedy; such as locked-jaw, gutta-serena, and other diseases of the eye. (See Wilkinson's Elements of Galvanism.)

GLYSTERS. Glysters are composed differently, according to the effect they are

intended to produce. The simple opening glyster, which is designed merely to remove the contents of the lower parts of the belly, consists of water-gruel, and a little sweet-oil; about one gallon of the former, and a pint of the latter. When water-gruel cannot be procured, warm water may be used, and linseed-oil may be substituted for sweet-oil; but I have often employed warm water alone with very good effect. The heat of the water should not exceed (or very little) that of the body, which is about 96 by the thermometer, or what is commonly termed *blood heat.*

This kind of glyster is extremely useful in the first stage of fevers, as it effectually removes any indurated fæces that may be lodged in the large intestines, without danger of creating debility. It is highly serviceable also in inflammation of the bowels, when accompanied with costiveness, and when the bladder is inflamed or irritable, which is indicated by pain and difficulty in staling; the horse voiding only very small quantities apparently mixed with matter, and that frequently; nothing relieves the animal more speedily than the simple glys-

ter, if it be assisted by other appropriate remedies. The next glyster we have to describe is the *anodyne*, which consists of water made highly mucilaginous by means of starch or arrow-root, and about two drams of *opium* dissolved in it. The quantity of liquid should not exceed three pints, or two quarts at most. This glyster acts also as an astringent in very obstinate diarrhœas. The last glyster we have to notice is the *cathartic*, which may be composed merely of one gallon of water and eight ounces of common salt; but when the bowels are very torpid, which is often the case in staggers, one ounce and a half of aloes may be added.

GRUEL. Water-gruel is extremely useful on many occasions. When medicines are given in the form of *drenches*, it makes the best vehicle, more particularly if the medicines be of an acrimonious nature, the mucilaginous quality of the gruel tending to prevent any unpleasant effect upon the stomach: for the same reason it is adviseable to give gruel immediately after the exhibition of any strong mineral preparation, such as sublimate, arsenic, &c. Nothing is more useful as an article of diet for sick or convalescent horses than water-gruel, provided

it is properly made; and as this is seldom done, we shall give the best method of making it. Take of fine and sweet oatmeal, four ounces; water, two quarts. Put the water over a slow clear fire to boil, and mix the oatmeal gradually with as much cold water as will make the mixture quite liquid. Add this to the water over the fire before it gets very hot, and continue to stir the whole until it boils. The gruel is then made, but may be improved by letting it simmer some time longer over a slow clear fire; for horses are very nice, and perhaps would not touch it if in the least smoky. Should the gruel be too thick, add warm water.

HYDRAGOGUES. Medicines that purge violently, and produce thin watery stools. Of this kind are elaterium and gamboge. It is a class of medicines of little or no use in veterinary practice.

LAXATIVES. Medicines that purge very gently, and without irritating the system. They are employed chiefly in febrile complaints accompanied with costiveness, in which cases the strongest purgatives would be injurious. They are useful also in slight cases of grease, swelling of the heels, and all cases of external inflammation, when the

horse is too weak to bear any considerable evacuation. On those occasions aloes is the best laxative; but in fevers, castor oil, with small doses of neutral salts, is most proper, being less liable to irritate the system.

LAXATIVE BALL.

No. 1. Succotrine aloes, five drams.
Venice soap, three drams.
Oil of caraway, twenty drops.

No. 2. Barbadoes aloes, four drams.
Salt of tartar, one dram and a half.
Compound powder of tragacanth, two drams.
Syrup, enough to form the ball.

Remark—These balls always operate more effectually when assisted by exercise and bran mashes, than when the horse is suffered to stand in the stable without receiving any attention.

LAXATIVE DRENCH, for fevers, &c.

No. 1. The best castor oil, one pint.
For one dose.

No. 2. Common salt, three or four ounces.

Water-gruel, enough to dissolve it perfectly: add to this, of linseed oil, eight ounces, for one dose.

Remark—Though we have in No. 2. prescribed linseed oil, there is no doubt that

castor oil is preferable: but this cannot always be procured readily; and as many may object to the expence of it, where the disorder is but trifling, linseed oil may on such occasions be substituted. Salad oil is still better. We have recommended common salt in preference to Glauber's and Epsom salt, because it is more certain in its effect, and may be given in much smaller doses.

LINIMENTS. A term for certain external applications, generally of an oily kind, between the consistence of an ointment and oil.

LINIMENT, for thrushes.

Barbadoes tar, one ounce.
Oil of turpentine, one ounce and a half.
Vitriolic acid, one dram.

First, mix the acid and turpentine very carefully, then add the tar. This is a good application for thrushes, and rottenness of the *frog*; the ragged part being first removed with a knife, and the part well cleaned and dried.

LINIMENT, for sore backs.

Extract of saturn, half an ounce.
Vinegar, one ounce.
Olive oil, two ounces.

To be incorporated well, by shaking.

LINIMENT, for old strains.

No. 1. Camphor, one ounce.
Oil of rosemary, half an ounce.
Oil of turpentine, two ounces
Olive oil, four ounces.—Mix.

No. 2. Camphor, half an ounce.
Oil of origanum, two drams.
Soft soap, two ounces.
Spirit of wine, four ounces.—Mix.

Remark—The *liniments* for strains may be applied also to incipient spavins, wind-galls, indurated swellings, and to parts affected with rheumatic pain; by the addition of powdered cantharides, they may be converted into blistering *liniments*; and flower of mustard renders them highly stimulating. We have given a few receipts under the head, *Embrocations*, though nearly every thing that can be useful in that way, is comprehended in the present subject.

LOTIONS. Liquids to wash diseased parts; they are employed chiefly in cases of external inflammation, or in cutaneous diseases.

LOTION, for inflamed eyes.

No. 1. Extract of saturn, one dram.

Spirit of wine, two drams.
Water, eight ounces.—Mix.

No. 2. Vitriolated copper, half a dram.
Water, eight ounces.—Mix.

No. 3. Vitriolated zinc, one dram.
Acetated lead, one dram.
Water, twelve ounces.—Mix.

No. 4. Extract of henbane, one dram.
Water, eight ounces.—Mix.

No. 5. Tincture of opium, two drams.
Water, six ounces.—Mix.

(See Eye Waters.)

COOLING LOTION, for external inflammation.

No. 1. Extract of saturn, one ounce.
Vinegar, two ounces.
Camphorated spirit of wine, three ounces.
Water, eighteen ounces.—Mix.

No. 2. Crude sal ammoniac, one ounce.
Vinegar, four ounces.
Spirit of wine, two ounces.
Water, eight ounces.—Mix.

These are remarkably useful in saddle-galls, and inflamed tumours, which it is proper to disperse.

LOTION, for foul ulcers.

No. 1. Vitriolated copper, one ounce.

Nitrous acid, half an ounce.
Water, six ounces.—Mix.

No. 2. Nitrous acid, one ounce.
Quicksilver, half an ounce.

Dissolve in an open place, and in a large phial, or gallipot, cautiously. When the solution is complete, add eight ounces of water.

OINTMENTS. External applications for wounds, &c. (See Digestives, Detergents, and Blisters. See also Emollients and Caustics.)

OINTMENT, for mange.

No. 1. Oil of turpentine, one ounce.
Vitriolic acid, two drams.

Mix cautiously in a large gallipot, and avoid the fumes which arise. While this mixture is hot, add of hog's-lard, four ounces. Sulphur vivum, finely powdered, two ounces.—Mix.

No. 2. Hog's-lard, four ounces.
Train-oil, two ounces.
Oil of turpentine, one ounce.
Sulphur vivum, four ounces.—Mix.

Remark—These are effectual remedies for the mange, both in dogs and horses.

OINTMENT, for sore-backs, from saddle-galls, &c.

No. 1. Ointment of althea, four ounces.
Extract of saturn, or goulard, one ounce.—Mix.

No. 2. Camphor, two drams.
Oil of rosemary, one dram.
Oil of elder, or hog's-lard, three ounces.—Mix.

To these may be added ointments for fistula, poll-evil, and canker; but the remedies for those complaints have been already noticed under the articles, *Digestives*, *Detergents*, and *Caustics*.

OINTMENT, for spavins, and wind-galls.
Strong mercurial-ointment, four ounces.
Camphor, half an ounce.
Oil of rosemary, two drams.

SOFTENING AND COOLING OINTMENT, for painful cracks, or ulcers of the heels.

No. 1. Spermaceti ointment, four ounces.
Olive oil, one ounce.
Sugar of lead, two drams.
Flowers of zinc, one ounce.—Mix.

No. 2. Ointment of althea, four ounces.

Extract of saturn, three drams.
Oil of elder, half an ounce.
Lapis calaminaris, finely levigated, one ounce.—Mix.

SATURNINE OINTMENT.

Spermaceti ointment, four ounces,
Cold-drawn linseed-oil, one ounce.

Melt them slowly, by placing the gallipot in boiling-water, and when the mixture is cooling, add of Goulard's extract, one ounce. Continue stirring until the mixture is cold.

Remark—There are various other ointments used by farriers, but the formulæ, or receipts, we have given here and in other places, will answer every purpose. There is an ointment termed *ægyptiacum*, much used by farriers, which is made by simmering over a slow fire, four ounces powdered verdigris, four ounces of honey, and eight ounces of strong vinegar: this is a detergent ointment; and the receipts we have given under this head are, I think, more efficacious.

OXYMELS. Mixtures of honey and vinegar. (See Materia Medica.)

They have been recommended in obsti-

nate coughs, and as a gargle in sore throats. I do not believe they are beneficial in either of those complaints. There is an *oxymel of squills* kept, which is made by infusing fresh squills in vinegar for several days, then straining off the liquid, and adding to it as much honey as will, by boiling gently, and taking off the scum which arises, give it the consistence of syrup.

This preparation is certainly much better adapted as a remedy to old coughs, than the simple *oxymel.*

The dose is three or four ounces.

PECTORALS. Medicines that cure or relieve diseases of the lungs. (See Expectorants, and Cordials Pectoral.) Demulcents are also useful as *pectorals* in some cases, and may be given in the form of *emulsions,* which see. Emollients also are useful in certain complaints of the lungs, particularly the linseed decoction, with a little honey dissolved in it. *Pectoral drinks* have been recommended in diseases of the lungs, which are generally composed of liquorice, figs, and marshmallows, boiled in water.

POWDERS. This sometimes is a very convenient form for giving medicines, as

many horses will take them in their corn without reluctance. It is by no means proper, however, for such as have a delicate appetite and are remarkably nice in feeding; for although they may after some time eat their food, yet the reluctance with which it is taken would prevent its being readily digested, or proving so nutritious as it would do, were it not so medicated.

Some horses, however, eat their corn very readily when mixed with powder; and to such it may be given without inconvenience. There is another objection to this mode of giving medicine, which is the difficulty of ascertaining whether the whole or not, or how much of the powder that is mixed with the corn, is taken. But this may in a great measure be done away, by sprinkling the corn with water, and mixing the powder with it very carefully. As we have before observed, whenever a horse appears unwilling to eat his corn thus medicated, the medicine should be given in some other form. The medicines best suited to this purpose are antimony, sulphur, resin, emetic tartar, nitre, aniseeds, &c. Medicines that are given in the form of powder, should be

finely sifted, or levigated; and when kept in that form, a well corked bottle is most proper for the purpose.

REFRIGERANTS. Medicines which take off unnatural heat from the body, such as takes place in fevers.

The best remedies of this kind, are nitre, and other neutral salts, (See Materia Medica,) cold water, and bleeding.

RELAXANTS. Medicines that are supposed to *relax* the fibres of the body; or such as diminish the capacity for motion in the living fibres. It is generally, however, applied to those which lessen or stop unnatural or increased motions, as in convulsion and spasm. The principal remedies of this class are antimonials, bleeding, warm bathing, and opium.

RESOLVENTS. This term is applied to those applications which are said to disperse inflamed tumours, or swellings, or to subdue inflammation of any kind. (See Inflammation.)

RESTRINGENTS. Medicines which restrain increased or unnatural evacuations. (See Astringents, Anodynes, and Styptics.)

ROBORANTS. (See Tonics.)

RUBEFACIENTS. A term used in medicine for applications which excite redness upon the skin, and which are employed for the purpose of removing deeply-seated pain or inflammation. The principal medicines of this kind are mustard and oil of turpentine. (See Embrocations and Liniments.)

SEDATIVES. Medicines that allay or diminish spasmodic or painful motion in the living fibres of the body.

SIALOGUES. Medicines that cause an increased secretion of saliva, or a salivation; such as the preparations of mercury.

STIMULANTS. A term of very extensive signification, and may with propriety be applied to the greater part of the articles of the Materia Medica. According to the celebrated Dr. John Brown, every medicine was considered as a *stimulant:* but it is probable that some, particularly the narcotics, have an opposite effect, particularly the distilled laurel water. The term *stimulant* is generally applied to those substances which perceptibly increase the motion of the heart and arteries. And under this head a great variety of remedies are included, both *internal* and *external;* among the former are cordials, cathartics, diuretics, &c.; the lat-

ter consist of embrocations, ointments, liniments, &c. It would fill a volume to treat properly of this subject; therefore we shall dismiss it without any further observation.

If the reader is desirous to obtain information on this head, he may consult Cullen's Materia Medica, Murray's Elements of Materia Medica, Brown's Elements of Medicine, and Darwin's Zoonomia.

STOMACHICS. Medicines that strengthen the stomach and excite appetite.

The term is nearly synonymous with cordials in veterinary medicine; though from *stomachics* we generally expect a more permanent effect than from those preparations denominated *cordial*, as they approach more to the nature of *tonics*. A few receipts will be given under this head, which are intended for horses that feed badly without any apparent cause, and such as are subject to flatulent colic and indigestion. Horses of this description are generally lean and in bad condition.

STOMACHIC BALL.

No. 1. Powdered gentian, half an ounce.
Powdered ginger, one dram and a half.

Prepared natron or soda, one dram.

Treacle, enough to form the ball for one dose.

No. 2. Cascarilla, powdered, one ounce.
Myrrh, one dram and a half.
Castile soap, one dram.

Syrup, enough to form the ball for one dose.

No. 3. Powdered quassia, two drams.
Aromatic powder, one dram and a half.
Salt of tartar, one dram.

Treacle, enough to form the ball for one dose.

No. 4. Powdered colombo root, half an ounce.
Powdered cassia, one dram.
Powdered rhubarb, two drams.

Syrup, enough to form the ball for one dose.

STYPTICS. Applications which suppress hemorrhages or bleeding. It is sometimes applied also to those internal remedies which cure bleeding from the kidneys, or red-water, and bleeding from the lungs. When any considerable blood-vessel is wounded in the horse, *styptics* are not to be

depended upon ; and when the bleeding is so inconsiderable as to submit to those applications, there is little reason to doubt, that it would cease after a short time without their use. (See Mat. Med. Styptics.)

TEMPERATURE. This subject is very seldom attended to in the management of horses, and it is very probable that many of their diseases arise from this omission. Horses that have been long accustomed to warm stables, generally receive injury by being put suddenly into such as are cold, particularly when they are exposed to a current of air ; and it is a well known fact, that many formidable diseases are produced by putting a horse that has been accustomed to live in the open air too suddenly into a warm stable. To this cause may be attributed the various diseases to which horses are subject when taken from grass or camp. In a well-constructed stable, some method may easily be found for regulating the temperature of the air, and making it either cold or warm ; for this purpose a thermometer should always be employed. Old horses that have been accustomed to warm stables, become lean and unfit for work if placed in

a colder situation, though their allowance of corn be increased. External warmth is quite a cordial to them, and gives them health and spirits; but on no occasion do we recommend those hot, close stables, so highly valued by grooms, though a very prolific source of disease. The stable should be always properly ventilated, and the body kept warm by clothing adapted to the season of the year and the temperature of the air.

TONICS. Medicines that augment the vigour of the body permanently, and are therefore useful in all cases arising from debility.

TONICS.

No. 1. Powdered bark, one ounce.
Ginger, two drams.
Salt of tartar, half a dram.
Form them into a ball with syrup.

No. 2. Salt of steel, half an ounce.
Aromatic powder, two drams.
Mucilage, enough to form the ball for one dose.

No. 3. Arsenic, ten grains.
Ginger, one dram.
Powdered aniseed, half an ounce.

Compound powder of tragacanth, two drams.

Syrup, to form the ball for one dose.

UNGUENTS. (See Ointments.)

URINE BALLS. (See Diuretics.)

WATER. Much has been written respecting the different qualities of water, some having been considered as very injurious to horses, while others have been said to promote health and condition. Dr. Bracken thought hard or pump water liable to produce the gravel or stone; and other authors have had still more whimsical notions on this subject. It appears probable that transparent and sweet water, that is, such as is most grateful to man, is most wholesome for horses, whether it be taken from a well or from any other situation. The ill effects that have sometimes resulted from drinking certain kinds of water, may depend upon its being drank too largely, or at too cold a temperature, at a time when the *stomach* was not in a *condition* for receiving so much, or upon its being so ill-tasted that the horse does not take a sufficient quantity for the purposes of digestion; or, if he does, it may create that degree of nausea, which proves

injurious to the stomach, and impedes its functions. In the former way we may explain the production of colic or gripes, by drinking largely of pump-water in summer, when the body is heated too much: and in the latter we can account for that loss of condition, and staring coat, so remarkable in horses that are kept on the coast, where the water is brackish.

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Printed by S. Hamilton, Weybridge.

00044765

Digitized with financial assistance from the
Government of Maharashtra
on 21 October, 2015